**Kundendienst-Handbuch**
**Service Manual**

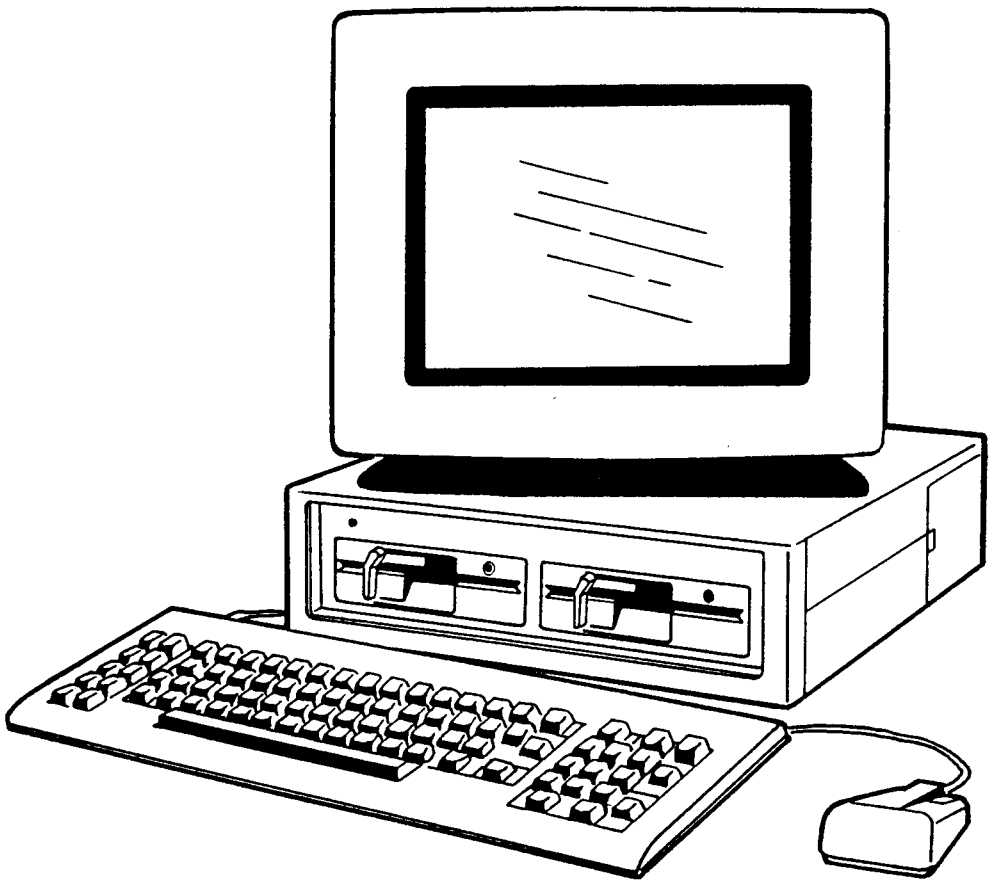
Schneider
COMPUTER DIVISION

# PERSONAL COMPUTER
# PC-1512 DD/PC-1512 SD

**Ident-Nr.: 27452** **Ident-Nr.: 27451**

# MONITOR
# PC-MM/PC-CM

**Ident-Nr.: 33632** **Ident-Nr.: 33631**

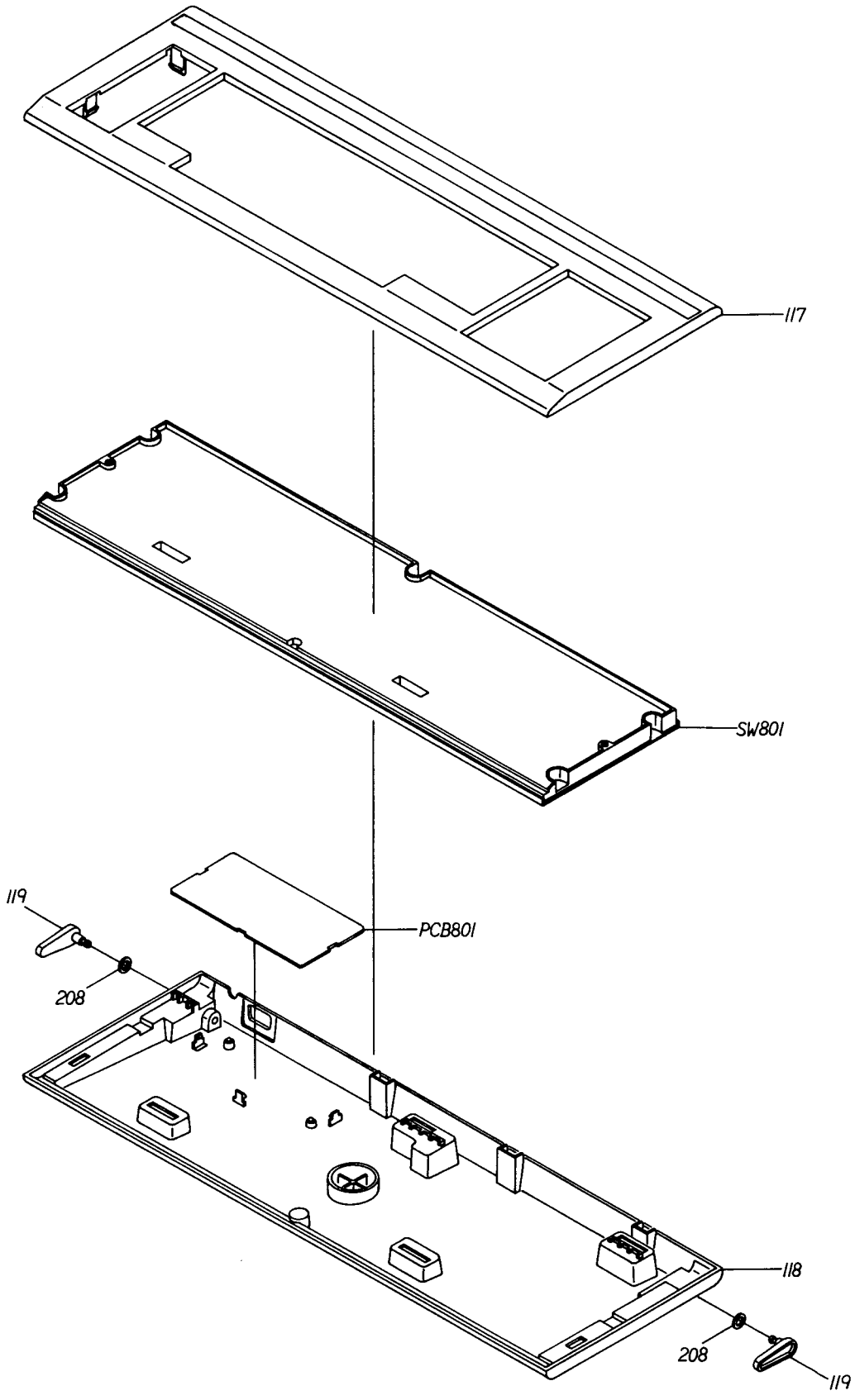


# Ersatzteilliste für PC 1512 DD / PC 1512 SD
# Parts List for Model PC 1512 DD / PC 1512 SD

| Best.-Nr.<br>Part-No. | Bezeichnung | Description | Teile-Nr.<br>Part-No. | Zeich.-Pos.<br>Ref.-No. |
|---|---|---|---|---|
| 3471100-424 | Abdeckung Slot | LID, PCB | 702KPA0119 | 101 |
| 3471200-3337 | Kontaktfeder | TERMINAL, BATTERY | 773KUE0002 | 102 |
| 3471300-3337 | Kontaktfeder | PLATE, SPRING | 773KUA0001 | 103 |
| 3471400-4191 | Winkel | PLATE, EARTH CPU | 753KSA0006 | 104 |
| 3471500-424 | Abdeckung | SCREW CAP | 737KPA0012 | 105 |
| 3471600-424 | Gehäuse Oberteil | CABINET, TOP | 702KPA0104 | 106 |
| 3471700-4196 | Rahmen FDD 1 | FRAME, FDD | 761KSA0106 | 107 |
| 3471800-431 | Frontrahmen 1512 DD | CABINET, FRONT ASS'Y | A21207723 | 108 |
| 3471900-431 | Frontplatte 1512 DD | PANEL, FRONT | 711KPJ0018 | |
| 3472000-436 | Schild Name 1512 DD | PLATE, BRAND | 7232530028 | |
| 3472100-431 | Frontrahmen 1512 SD | CABINET, FRONT ASS'Y | A21206723 | |
| 3472200-431 | Frontplatte 1512 SD | PANEL, FRONT | 711KPJ0019 | |
| 3472300-436 | Schild Name 1512 SD | PLATE, BRAND | 7232530027 | |
| 3472400-436 | Schild SD | PLATE, DECORATION | 7230001346 | |
| 3472500-436 | Schild SD | SHEET, FDD | 7230001483 | |
| 3472600-436 | Schild SD | SHEET, DOUBLE FACE | 7230001492 | |
| 3472700-4196 | Abschirmblech Oberteil | PLATE, SHIELD TOP | 752KSA0076 | 109 |
| 3472800-4196 | Abschirmblech Boden | PLATE, SHIELD BOTTOM | 752KSA0077 | 110 |
| 3472900-4195 | Winkel | PLATE, JACK EARTH | 753KUA0002 | 111 |
| 3473000-4281 | Knopf Dreh | KNOB, VOLUME | 732KPA0022 | 112 |
| 3473100-423 | Gehäuse Boden | CABINET, BOTTOM ASS'Y | A21207733 | 113 |
| 3473200-4151 | Gummifüße | LEG RUBBER | 704JRA0005 | |
| 3473300-4361 | Typenschild 1512 DD | SHEET, RATING | 7220000301 | |
| 3473400-4361 | Typenschild 1512 SD | SHEET, RATING | 7220000302 | |
| 3473500-436 | Schild | SHEET, JACK (A) | 7230001454 | |
| 3473600-436 | Schild | SHEET, JACK (B) | 7230001455 | |
| 3473700-436 | Schild | SHEET, JACK (C) | 7230001456 | |
| 3473800-424 | Abdeckung Schnittstelle | LID, JACK | 702KPA0120 | 114 |
| 3473900-424 | Gehäuse Oberteil | CABINET, TOP | 702KPA0121 | 117 |
| 3474000-436 | Schild Name | PLATE, BRAND | 7232530029 | |
| 3474100-423 | Gehäuse Boden | CABINET, BOTTOM | 702KPA0122 | 118 |
| 3474200-4151 | Gummifüße | LEG RUBBER | 704JRA0004 | |
| 3474300-4361 | Typenschild | SHEET, RATING | 7220000300 | |
| 3474400-424 | Kunststoffüße | STAND, KEYBOARD | 704KPA0014 | 119 |
| 3474500-4196 | Rahmen FDD 2 | FRAME, FDD (2ND) | 761KSA0107 | 120 |
| 3474600-4013 | Schraube m 3×6 | SEMS (A) M 3× 6 CH | 810A130604 | 201 |
| 3474700-4043 | Schraube m 4×60 | TAP TITE (P) M 4×60 CH | 8110640F01 | 204 |
| 3474800-4043 | Schraube m 3×55 | TAPPING (B0) BIND 3×55 CH | 8116230E54 | 205 |
| 3474900-4043 | Schraube m 4×40 | TAP TITE (P) BIND 4×40 CH | 8110240D04 | 206 |
| 3475000-3391 | Masseband | EARTH LUG (B6) 4.2 | 901B06000K | 207 |
| 3475100-4081 | Scheibe | WASHER 6.3×10.5×T0.15 | 82C60A0B5U | 208 |
| 3475200-3391 | Masseband | EARTH LUG (B4) 3.2 | 901B04000K | 210 |
| 3475300-214 | Folienbeutel | POLY BAG, SET | 791KHA0046 | |
| 3475400-214 | Folienbeutel | POLY BAG, SET | 791KHA0047 | |
| 3475500-213 | Styropor links | PACKAGE, LEFT | 792KHA0079 | |
| 3475600-213 | Styropor rechts | PACKAGE, RIGHT | 792KHA0080 | |
| 3475700-213 | Styropor links | PACKAGE, LEFT | 792KHA0085 | |
| 3475800-213 | Styropor rechts | PACKAGE, RIGHT | 792KHA0086 | |
| 3475900-212 | Faltkarton DD | GIFT BOX | 793KCD0235 | |
| 3476000-212 | Faltkarton SD | GIFT BOX | 793KCD0234 | |

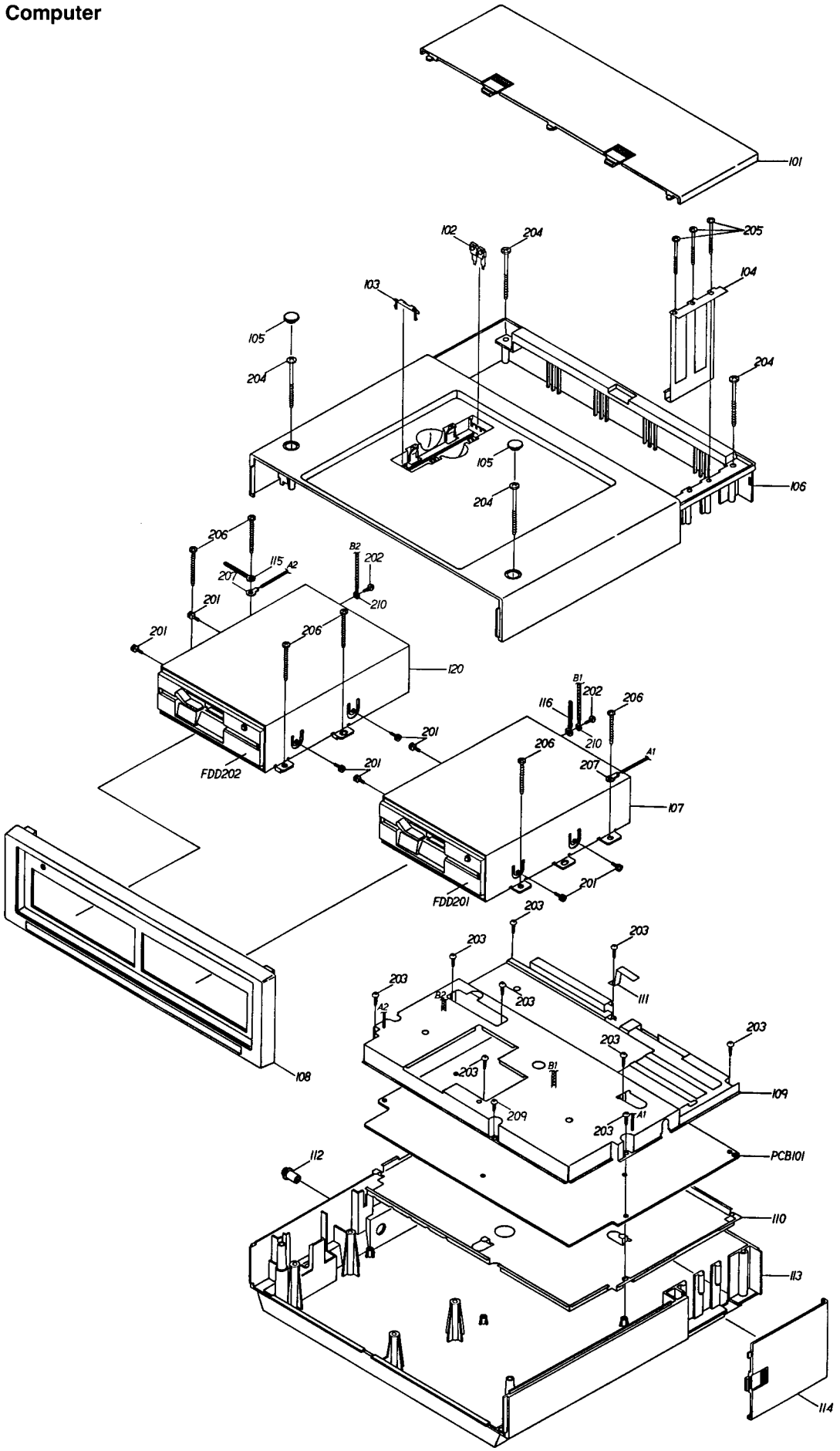
# Mechanical exploded view

## Keyboard



# Mechanical exploded view

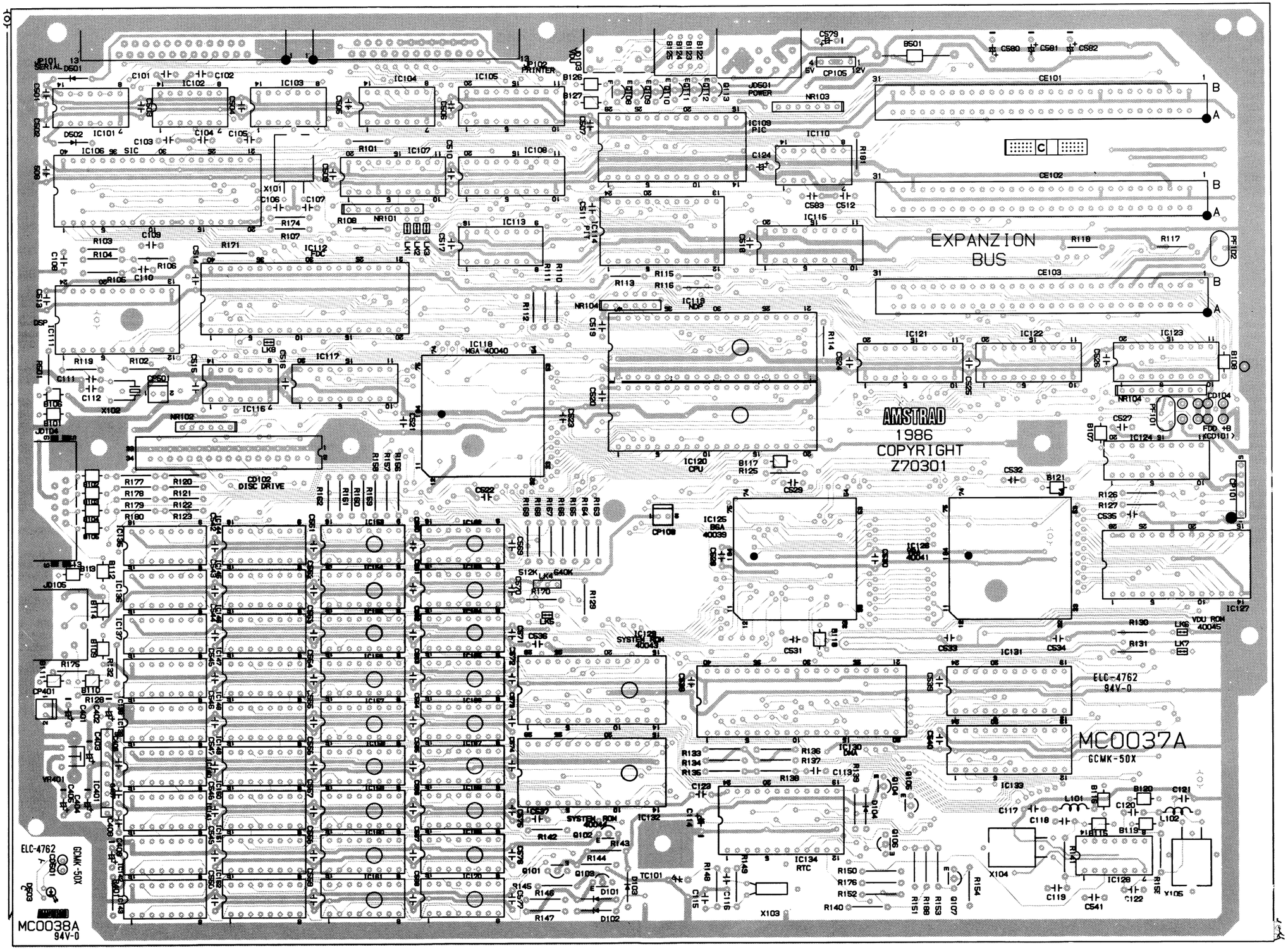
## Computer



# Ersatzteilliste für PC 1512 DD / PC 1512 SD
# Parts List for Model PC 1512 DD / PC 1512 SD

| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| **IC** | | | | | |
| 3476200-302 | IC | MC1488P | IC | 16PDC14880 | IC101 |
| 3476300-302 | IC | MC1489AP | IC | 16PDC14890 | IC102 |
| 3476300-302 | IC | MC1489AP | IC | 16PDC14890 | IC103 |
| 1524100-302 | IC | HD7406P | IC | 164D7406P0 | IC104 |
| 2635300-302 | IC | DN74LS373 | IC | 161DLS3730 | IC105 |
| 3476400-302 | IC | INS8250N | IC | 14DDS82500 | IC106 |
| 3476500-302 | IC | DN74LS240P | IC | 161DLS2400 | IC107 |
| 2635400-302 | IC | DN74LS244 | IC | 161DLS2440 | IC108 |
| 3476600-302 | IC | MBL8259A-2P | IC | 14QDL82590 | IC109 |
| 3476700-302 | IC | DN74LS125P | IC | 161DLS1250 | IC110 |
| 3239900-302 | IC | SED9420CAC | IC | 16ZD094200 | IC111 |
| 2922000-302 | IC | Z765APS | IC | 14SDZ765A0 | IC112 |
| 3476800-302 | IC | DN74LS174P | IC | 161DLS1740 | IC113 |
| 3476900-302 | IC | UPD8253C-5 | IC | 142DD82530 | IC114 |
| 2635400-302 | IC | DN74LS244 | IC | 161DLS2440 | IC115 |
| 3216700-302 | IC | DN74LS14P | IC | 161D4LS140 | IC116 |
| 2922200-302 | IC | TC74HC240P | IC | 155DHC2400 | IC117 |
| 3477000-302 | IC | HSG5140 | IC | 18WP400400 | IC118 |
| 3477100-302 | IC | MBL8086-2P | IC | 14QDL80860 | IC120 |
| 2635400-302 | IC | DN74LS244 | IC | 161DLS2440 | IC121 |
| 2635300-302 | IC | DN74LS373 | IC | 161DLS3730 | IC122 |
| 3477200-302 | IC | DN74LS245P | IC | 161DLS2450 | IC123 |
| 2635400-302 | IC | DN74LS244 | IC | 161DLS2440 | IC124 |
| 3477300-302 | IC | HSG5140 | IC | 18WP400390 | IC125 |
| 3477400-302 | IC | HSG5420 | IC | 18WP400410 | IC126 |
| 3477500-302 | IC | LH236901 | IC | 14GD400450 | IC127 |
| 2981600-302 | IC | TC74HCU04P | IC | 155DHCU04D | IC128 |
| 3477600-302 | IC | MSM3864B01RS | IC | 149D400430 | IC129 |
| 3477700-302 | IC | UPD8237AC-5 | IC | 142DD82370 | IC130 |
| 3477800-302 | IC | UPD41264C-15 | IC | 142D412640 | IC131 |
| 3477900-302 | IC | MSM3864B02RS | IC | 149D400440 | IC132 |
| 3478000-302 | IC | UPD41264C-15 | IC | 142D412640 | IC133 |
| 3478100-302 | IC | MC146818P | IC | 15PD468180 | IC134 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC135 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC136 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC137 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC138 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC139 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC140 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC141 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC142 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC143 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC144 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC145 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC146 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC147 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC148 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC149 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC150 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC151 |
| 3478200-302 | IC | MN41256-15 | IC | 141D41256C | IC152 |
| 2635800-302 | IC | LA4140 | IC | 103SP41400 | IC401 |
| 3478300-302 | IC | UPD8048HC PC | IC | 142D400420 | IC801 |
| 3201300-302 | IC | TC74HC14P | IC | 155D4HC140 | IC802 |

# CPU P.C.B.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ELC-4762
94V-0
MC0038A
94V-0
ELC-4762
GCMK-50X
IC101 SERIAL
DS01
CP102 PRINTER
JDS01 POWER
CP105
B501
CE101
CE102
CE103
IC106 SIC
IC109 PIC
IC110
IC112 FDC
IC115 PIT
IC116 MGA 40040
IC118 MGA 40040
IC119 NDP
IC120 CPU
IC121
IC122
IC123
IC124
IC125 BGA 40039
IC126 BGA 40041
IC127
IC128 SYSTEM ROM 40044
IC129 SYSTEM ROM 40044
IC130 DAA
IC131
IC132
IC133
IC134 RTC
VDU ROM 40045
CD102 DISC DRIVE
CD104
FDD +B (CD101)
PF101
PF102
X101
X102
X103
X104
X105
LK3
LK4 640K
LK5
LK6
LK7
LK8
512K
TC101
TC401
VR401
CP401
JD104
JD105
JD106

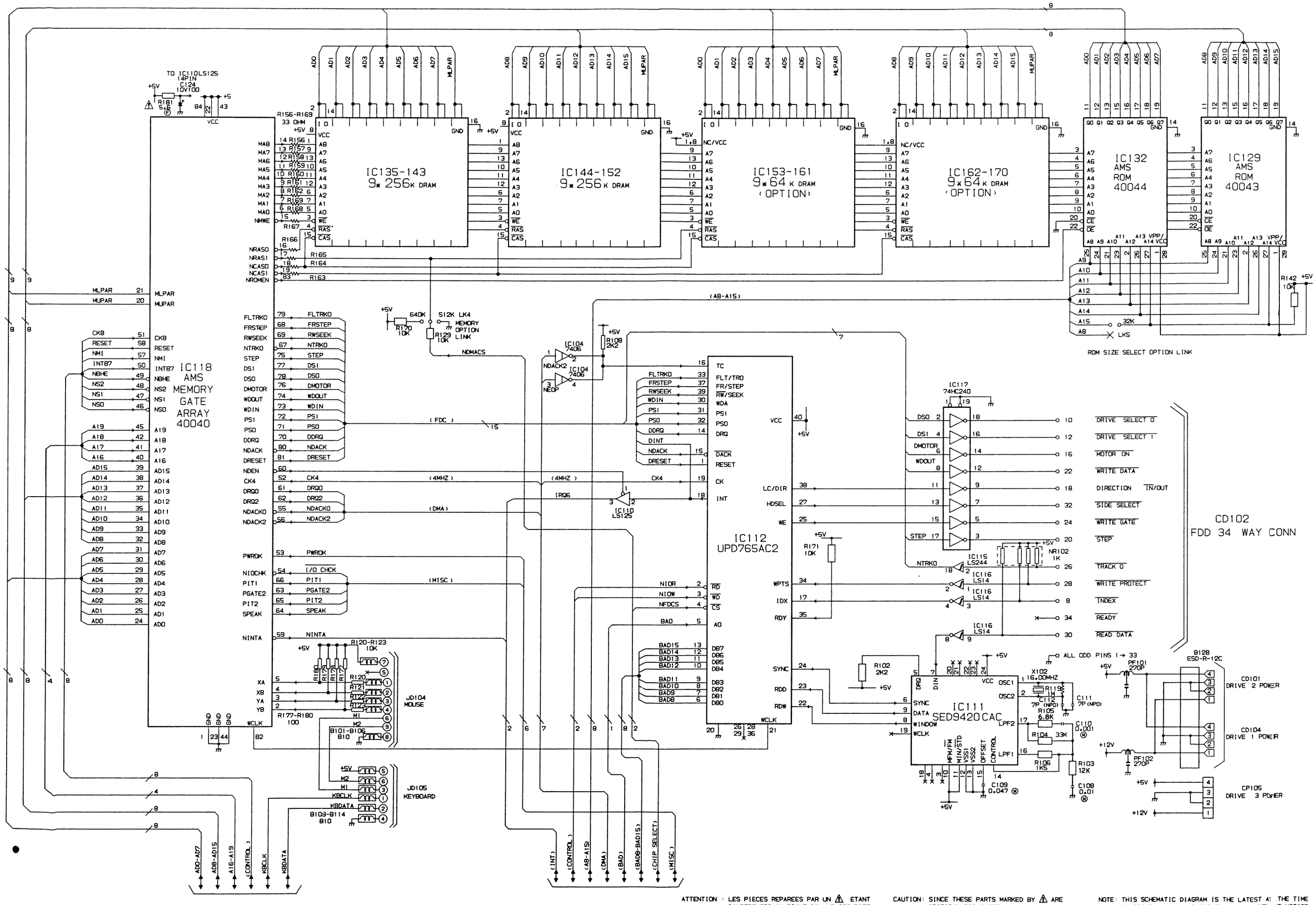
| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| **Transistoren / Transistors** | | | | | |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q101 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q102 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q103 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q104 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q105 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q106 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCAT021203 | Q108 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCAT021203 | Q109 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCAT021203 | Q110 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCA0021203 | Q111 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCAT021203 | Q112 |
| 2635900-301 | Transistor | KTC2120 O | TRANSISTOR, SILICON | TCAT021203 | Q113 |
| **Dioden / Diodes** | | | | | |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D101 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D102 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D103 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D104 |
| 0320800-304 | Diode | KDS1555-T | DIODE, SILICON | D1AT015550 | D105 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D501 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D502 |
| 1209800-3045 | LED | TLS134A | LED | 0021520130 | D503 |
| **Widerstände / Resistors** | | | | | |
| 3478400-3217 | Sich.-Widerstand | 5.6 ¼ W | R, FUSE | R615845R6J | R181 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R189 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R190 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R191 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R192 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R193 |
| 1007300-318 | Widerstand | 1.0 K ¼ W | RC | R0D104102J | R194 |
| 3206300-3219 | Widerstand/Netzwerk | RGLN7X472J | R, NETWORK | 1102747203 | NR101 |
| 3478500-3219 | Widerstand/Netzwerk | RGLN5X102J | R, NETWORK | 1102510202 | NR102 |
| 3478600-3219 | Widerstand/Netzwerk | RGLN6X222J | R, NETWORK | 1102622202 | NR103 |
| 3478700-3219 | Widerstand/Netzwerk | RGLN5X222J | R, NETWORK | 1102522202 | NR104 |
| 3206400-3219 | Widerstand/Netzwerk | RGLN8X472J | R, NETWORK | 1102847204 | NR105 |
| 3478800-3219 | Widerstand/Netzwerk | RGLN10X103J | R, NETWORK | 1102A10302 | NR801 |
| 3478900-3221 | Poti | EVU-E2AF15B24 | VOLUME | V018024B02 | VR401 |



Ersatzteilliste für PC 1512 DD / PC 1512 SD
Parts List for Model PC 1512 DD / PC 1512 SD

| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| **Spulen und Transformatoren / Coils and Transformer** | | | | | |
| 3202300-3251 | Spule | LAL03KH2R2M | COIL INDUCTOR | 021JB22R2M | L101 |
| 3202300-3251 | Spule | LAL03KH2R2M | COIL INDUCTOR | 021JB22R2M | L102 |
| 3479000-3253 | Filter | DSS310-54B271M | FILTER EMI | 1162L271M3 | PF101 |
| 3479000-3253 | Filter | DSS310-54B271M | FILTER EMI | 1162L271M3 | PF102 |
| **Verschiedenes / Miscellaneous** | | | | | |
| 3479100-3259 | Quarz | HC49U.843M | CRYSTAL | 10061R8401 | X101 |
| 3254100-3253 | Keramikoszillator | CSA16.00MX7 | CERAMIC OSCILLATOR | 100216R004 | X102 |
| 3479200-3259 | Quarz | DSVT30032K | CRYSTAL | 1006R03201 | X103 |
| 3479300-3259 | Quarz | HC18RW24.0 | CRYSTAL | 100E24R002 | X104 |
| 3479400-3259 | Quarz | HC18RW28.636 | CRYSTAL | 100E28R602 | X105 |
| 3479500-3171 | Keramikoszillator | KBR-6.0M | CERAMIC OSCILLATOR | 10036R0002 | X801 |
| 3479600-3171 | Keramiktrimmer | | TRIMMER CERAMIC | 0100512009 | TC101 |
| 3479700-680 | Lautsprecher | | SPEAKER | 070B020002 | SP401 |
| 3479800-3276 | Tastatur | ESU-2435 | SWITCH, KEYBOARD | 0506185005 | SW801 |
| 3479900-502 | Platine | MC0037A | PCB | 13MC0037A6 | PCB101 |
| 3480000-502 | Platine CPU | MC0038A | PCB | 13MC0038A6 | PCB102 |
| 3480100-502 | Platine Tastatur | MK0002A | PCB | 13MK0002AB | PCB801 |
| 3480200-502 | Floppy Disc Laufwerk 5¼" | | COMPACT FLOPPY DISK DRIVE | 160651002A | FDD201 |
| 3480300-502 | Floppy Disc Laufwerk 5¼" | | COMPACT FLOPPY DISK DRIVE | 160651003A | FDD202 |
| 3480400-333 | Buchse Expansion | | SOCKET D-SUB 475-31-30-042 | 069LN62001 | CE101 |
| 3480400-333 | Buchse Expansion | | SOCKET D-SUB 475-31-30-042 | 069LN62001 | CE102 |
| 3480400-333 | Buchse Expansion | | SOCKET D-SUB 475-31-30-042 | 069LN62001 | CE103 |
| 3480500-333 | Buchse SUB-D | 25pol. Drucker | SOCKET D-SUB | 063L100008 | JD102 |
| 3480700-3322 | Buchse DMW | 8pol. VDU | JACK DIN | 0622780002 | JD103 |
| 3480600-333 | Buchse SUB-D | 9pol. Maus | SOCKET D-SUB | 063L100009 | JD104 |
| 2636400-3322 | Buchse DIN | 6pol. Tastatur | JACK DIN | 0622760001 | JD105 |
| 3480800-3322 | Buchse DIN | 14pol. Power | JACK DIN | 06227E0001 | JD501 |
| 3480900-333 | Stecker SUB-D | 25pol. Seriell | SOCKET D-SUB | 063L200007 | JP101 |
| 2636500-3322 | Buchse SUB-D | 9pol. Joystick | SOCKET D-SUB | 063L200009 | J801 |
| 3481000-341 | Kabel Power | | MATE N LOK | 068GI15001 | CD101 |
| 3481100-341 | Kabel Disc Drive | | CORD CONNECTOR | 068W6Y005A | CD102 |
| 3481200-341 | Kabel Power | | MATE N LOK | 068GI33002 | CD104 |
| 3481300-341 | Kabel Tastatur | | DIN CORD | 068GE47001 | CD801 |
| 3481400-333 | Buchse | 6pol. | CONNECTOR PCB SIDE | 0694160059 | CP801 |
| 3481500-333 | Buchse | 11pol. | CONNECTOR PCB SIDE | 06956B0010 | CP802 |
| 3481500-333 | Buchse | 11pol. | CONNECTOR PCB SIDE | 06356B0010 | CP803 |
| 2305200-3327 | IC Sockel | 28pol. | SOCKET, IC | 0675128002 | J102 |
| 0605000-3327 | IC Sockel | 16pol. | SOCKET, IC | 0675116002 | J103 |
| 2383400-3327 | IC Sockel | 40pol. | SOCKET, IC | 0675140002 | J122 |

# Chassis schematic diagram

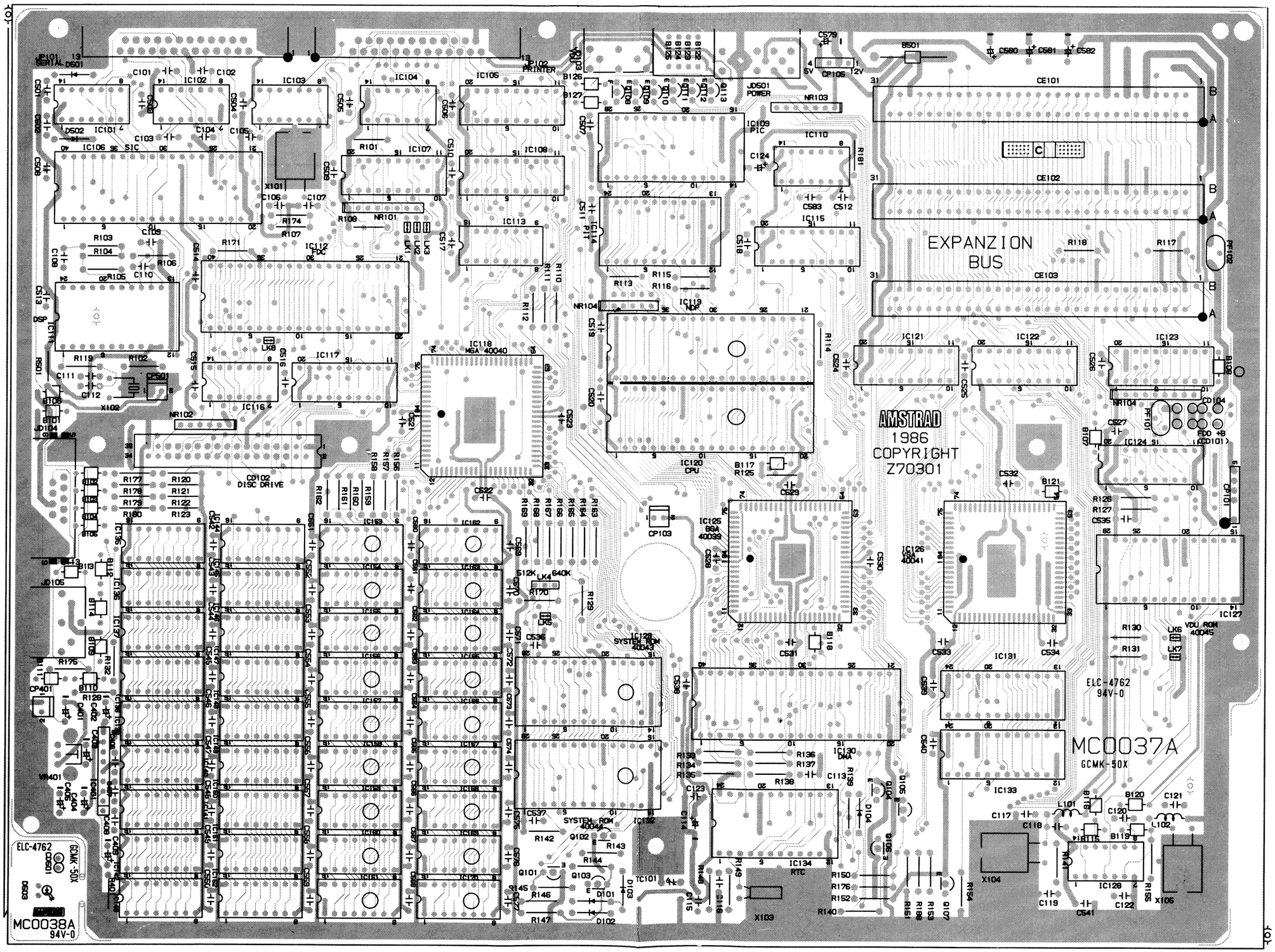



ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

# CPU P.C.B.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IC126
40041
IC128
SYSTEM ROM
40043
IC132
SYSTEM ROM
40044
IC130
DMA
IC131
IC133
IC134
RTC
IC135
IC136
IC137
IC109
PIC
IC110
IC112
FDC
IC113
IC114
NDP
IC115
IC116
IC117
IC121
IC122
IC123
IC124
IC127
VDU ROM
40045
IC101
SERIAL
IC102
PRINTER
IC103
IC104
IC105
IC106
SIC
IC107
IC108
JD501
POWER
CP105
5V
12V
BS01
CE101
CE102
CE103
CD102
DISC DRIVE
CD104
PDD +B
CD101
CP101
CP103
CP401
CP501
X101
X102
X103
X104
X105
X106
NR101
NR102
NR103
NR104
LK1
LK2
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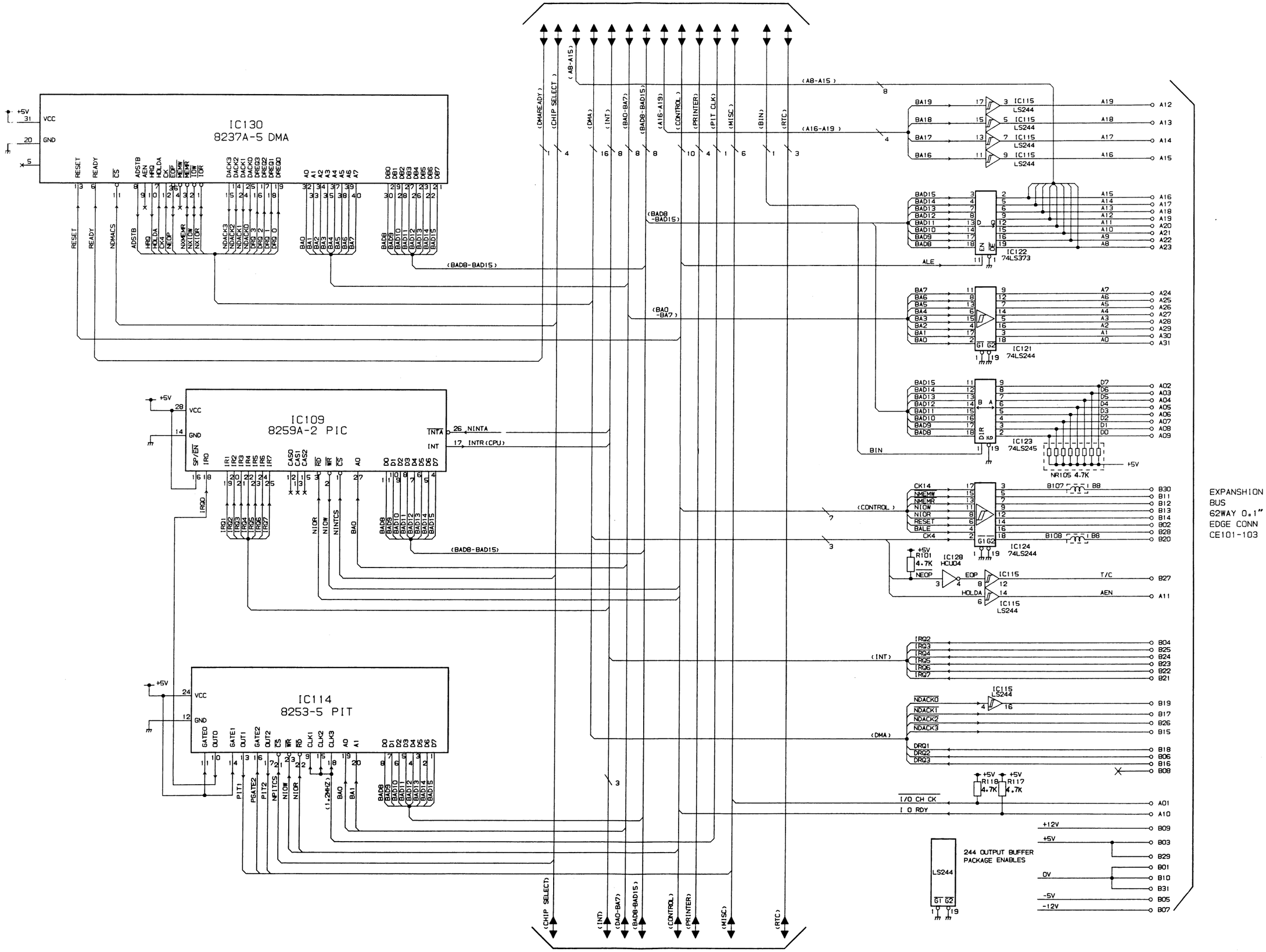
LK7
LK8
640K
512K
PF101
PF102

# Chassis schematic diagram



# Chassis schematic diagram

IC119 8087-2 NDP (OPTION)

IC120 8086-2 CPU

IC125 AMS BUS GATE ARRAY 40039

IC127 AMS ROM 40045

IC131 256K D-RAM

IC133 256K D-RAM

AMS VDU GATEARRAY IC126 40041

JD103 VDU DIN (8PIN) SOCKET CONN

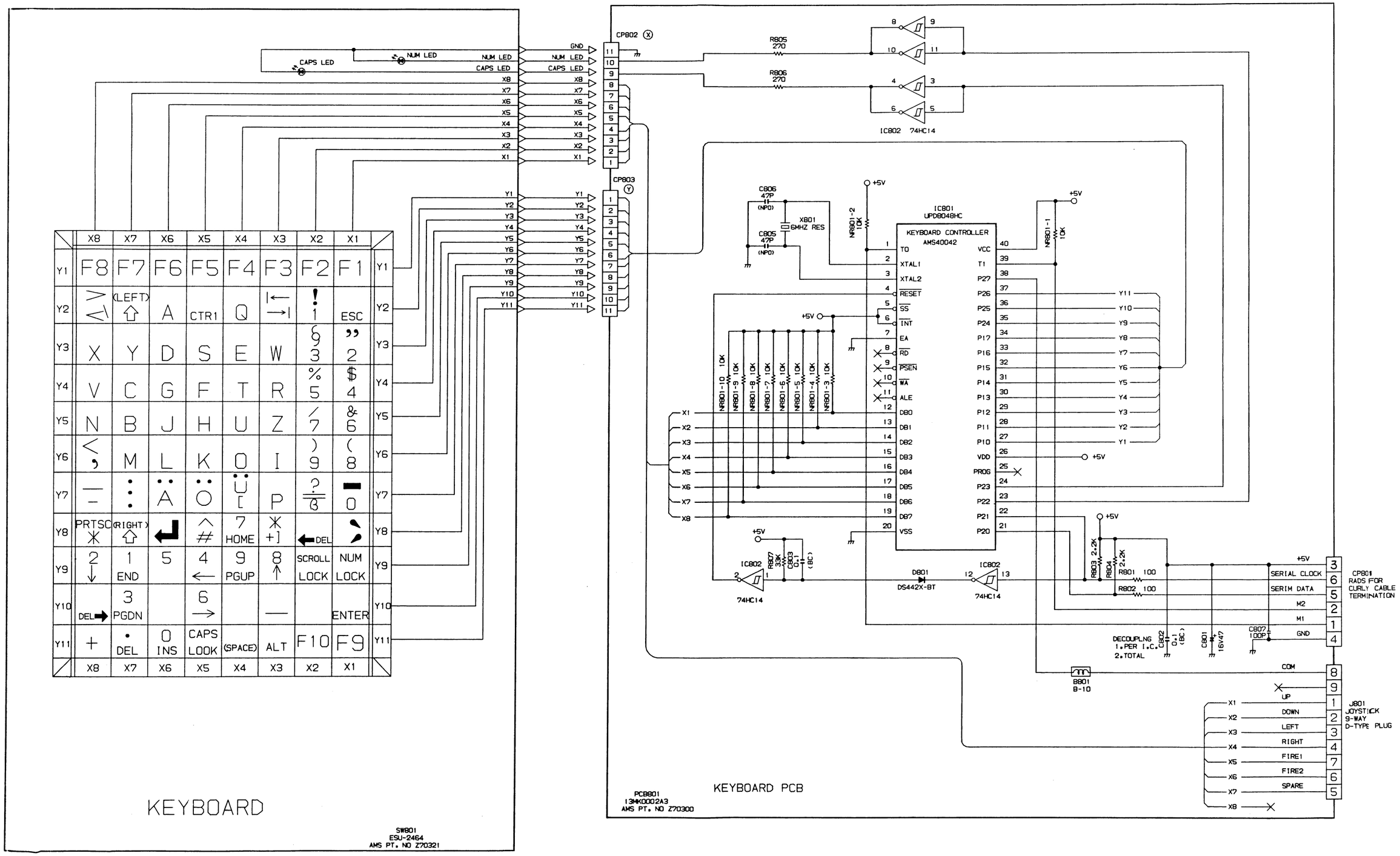
CP101

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

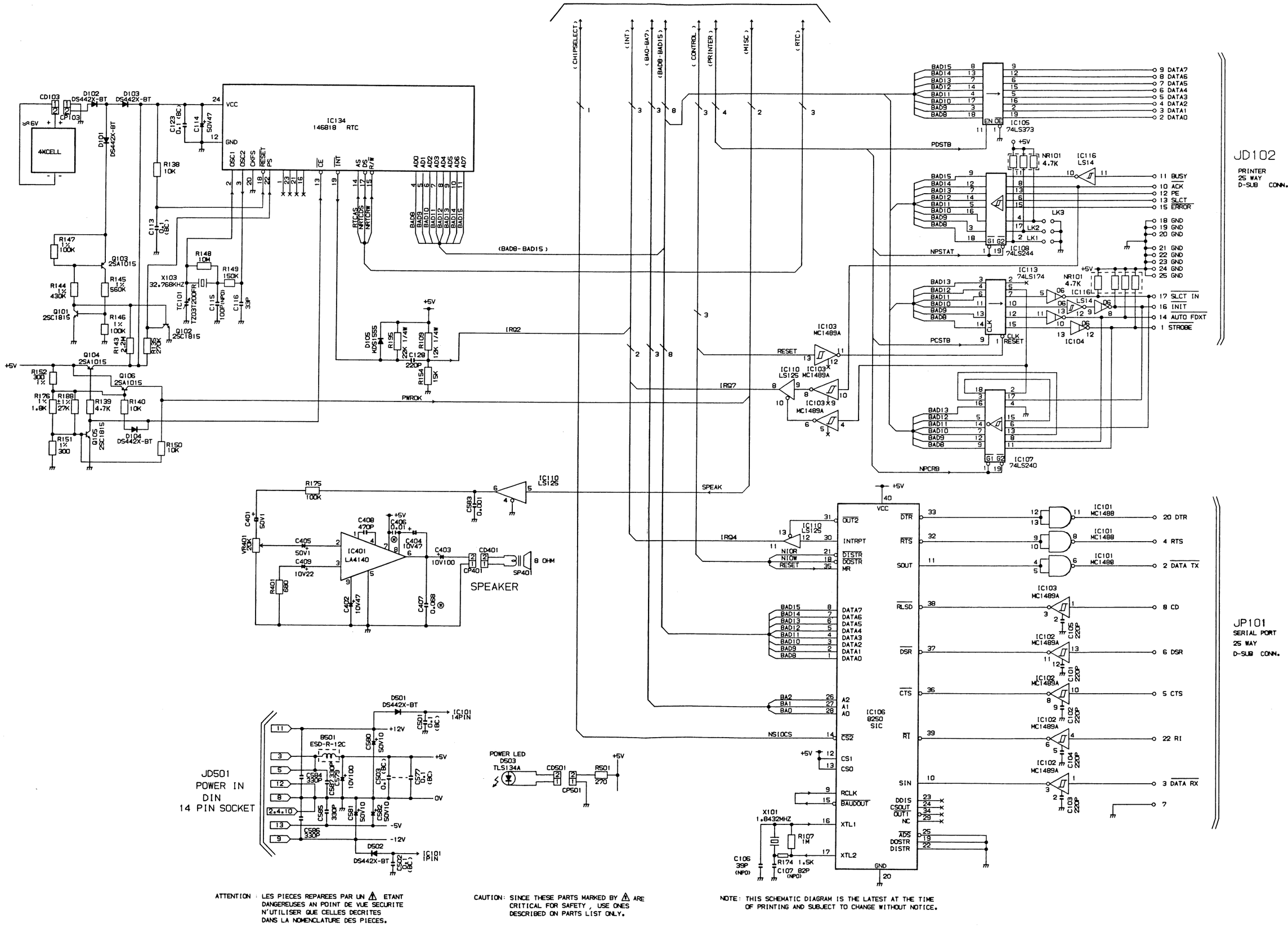
ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

# Chassis schematic diagram



# Chassis schematic diagram

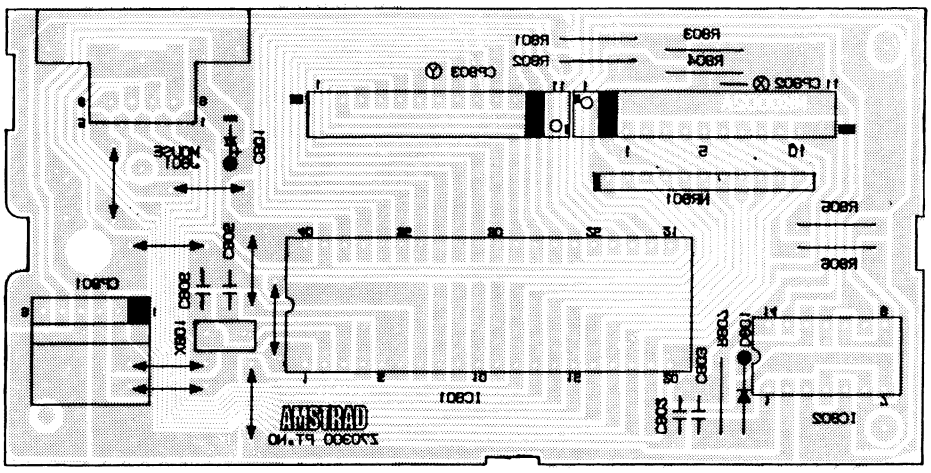



ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY , USE ONES DESCRIBED ON PARTS LIST ONLY.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

# Keyboard P.C.B.

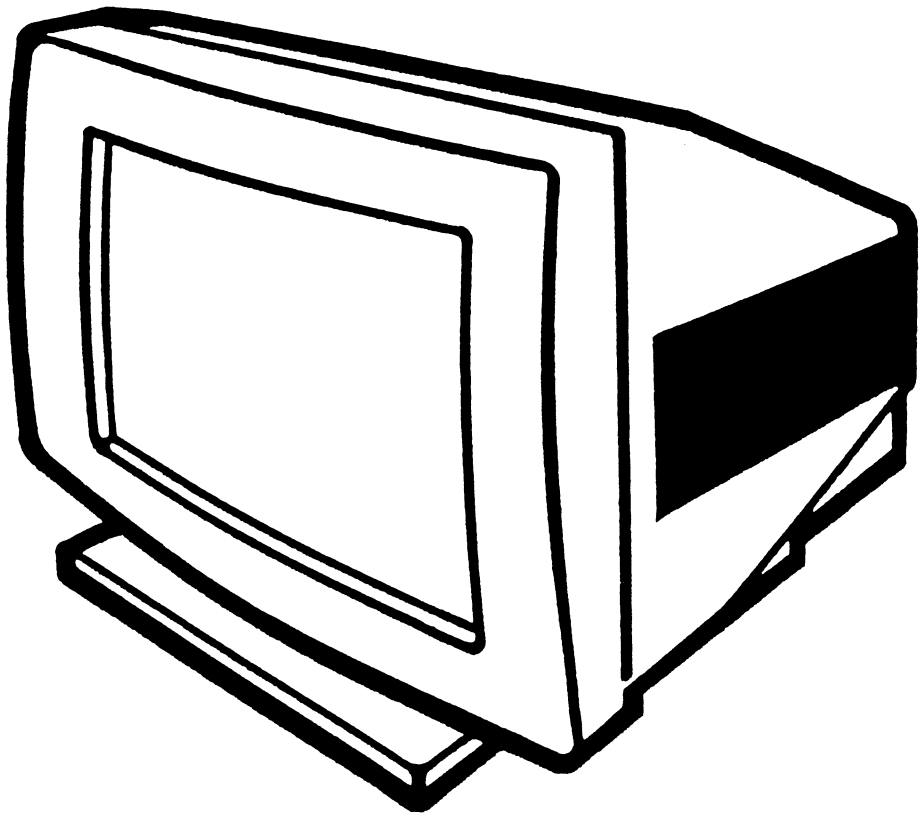



SYMBOL LIST

| | |
|---|---|
| RESISTOR | |
| SEMI-FIXED RESISTOR | |
| CAPACITOR | |
| JUMPER | |

# MONOCHROME MONITOR

# MODEL PC-MM



# Major components location guide

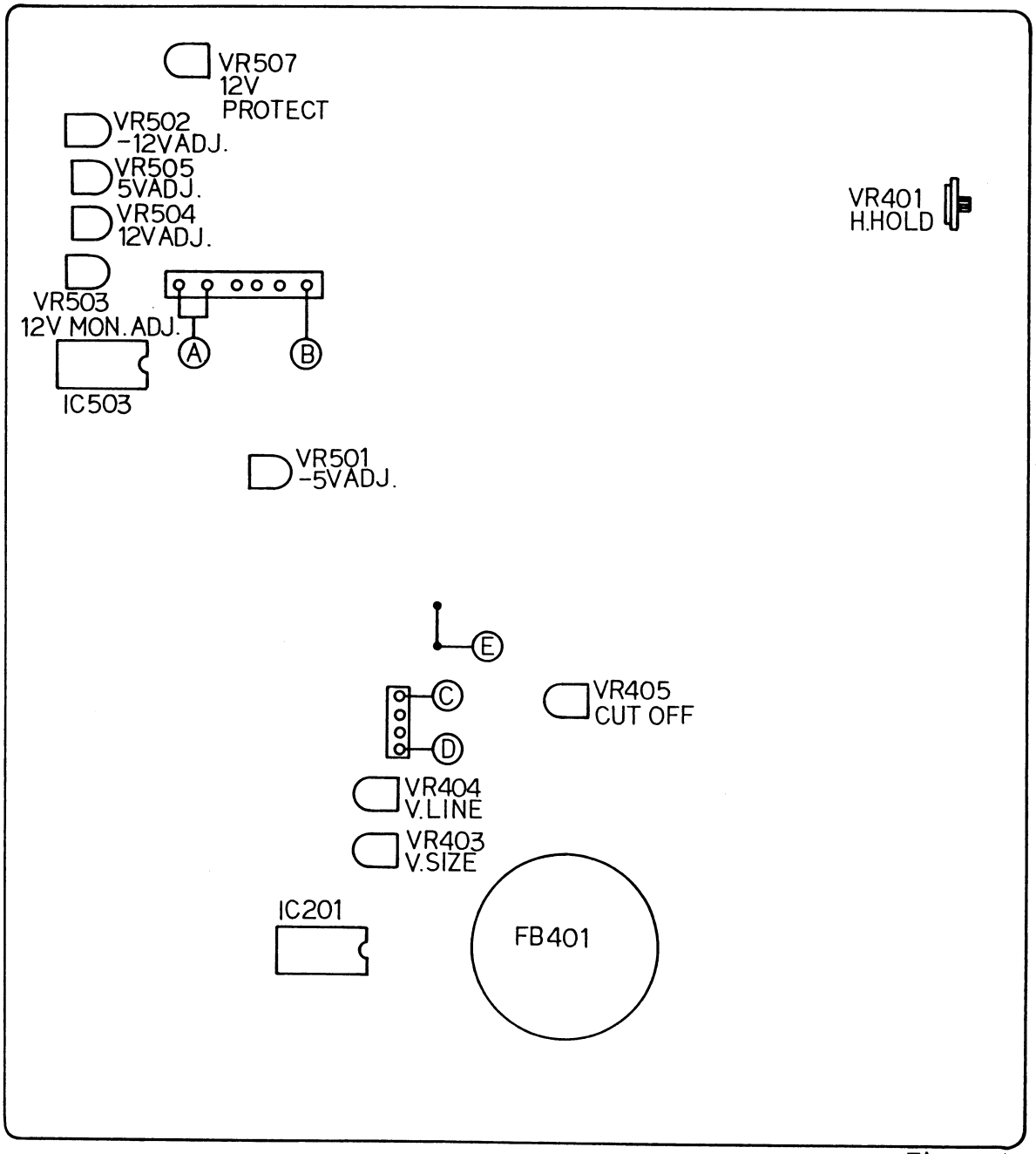



Figure A

# Abgleichanweisung
# ALIGNMENT INSTRUCTIONS

**Bildhöhen-Einstellung**
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild „Circle alignment test".
2. Mit Regler VR403 den oberen und unteren Bildrand auf 12 mm ±3 mm einstellen.

**Linearitäts-Einstellung**
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild „Circle alignment test".
2. Mit Regler VR404 das Testbild so einstellen, daß die Kreise rund dargestellt werden.

**Schirmgitterspannung-Einstellung**
1. Laden Sie die VDU-Testsoftware (F3) und schalten Sie das Bildsignal aus (Turn video off).
2. Helligkeitsregler VR201-2 und Kontrastregler VR201-1 auf maximum.
3. Mit Regler VR405 das Bild so einstellen, daß ein sattes Schwarzbild erscheint.

**Horizontalfrequenz-Einstellung**
1. Steuern Sie den Monitor mit keinem Signal an! (RGB-Verbindung zur Systemeinheit lösen).
2. Frequenzzähler an IC401 Pin 9 anschließen.
3. Mit Regler VR401 die Frequenz auf 15700 Hz einstellen.

**V. SIZE ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Circle Pattern appear on the screen.
2. Adjust the VR403 so that the Border Size become as shown below. (Refer to Fig. 1)
   A.C ... 12 mm ±3 mm

**V. LINE ADJUSTMENT**
1. Insert the VDU TEST floppy Disk into PC-1512 and make the Circle Pattern appear on the screen.
2. Adjust the VR404 so that E – F are equal and make 4 circle's on the corners be perfect circle. (Refer to Fig. 1)

**CUT OFF ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Turn Video Pattern (Black 100%) appear on the screen.
2. Set the Bright (VR201-2) and the Contrast (VR201-1) to maximum position.
3. Adjust the VR405 so that black on the screen will not be bright.

**SUB H-HOLD AND H-HOLD ADJUSTMENT**
1. Shut off the input signal and set the screen to the free-run condition.
2. Connect frequency counter to CRT heater.
3. Adjust VR401 to obtain 15,700 Hz reading.

# Abgleichanweisung
# ALIGNMENT INSTRUCTIONS

**5 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt A anschließen.
2. Mit VR505 auf 5.1 V DC ±0.02 V einstellen.

**12 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt B anschließen.
2. Mit VR504 auf 12.15 V DC ±0.02 V einstellen.

**−5 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt C anschließen.
2. Mit VR501 auf −5 V DC ±0.05 V einstellen.

**−12 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt D anschließen.
2. Mit VR502 auf −12 V DC ±0.05 V einstellen.

**12 V DC Einstellung (Monitor)**
. Digitalvoltmeter an Meßpunkt E anschließen.
2. Mit Regler VR503 auf 12 V DC ±0.05 V einstellen.

**12 V DC Schutzschaltung**
1. Schließen Sie in Reihe zur +12 V DC-Leitung ein Amperemeter, sowie einen Lastwiderstand mit ca. 35 Watt gegen Masse.
   Dieser Widerstand muß so gewählt sein, daß der Strom ca. 4.5 A−4.6 A beträgt.
2. Mit Regler VR507 die Schutzschaltung so einstellen, daß sie bei dieser Belastung noch nicht anspricht.

**Bildlage-Einstellung**
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild „Circle alignment test".
2. Drehen Sie die Ablenkspule bis das Testbild waagerecht ist. Befestigen Sie die Ablenkspule.
3. Mit den Magnetringen am Bildröhrenhals die Bildlage und Mitteneinstellung vornehmen. (siehe Abb. 1; B, D = 12 mm +3 mm)

**DC 5 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to A, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR505 so that it indicates DC 5.10 V ±0.02 V.

**DC 12 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to B, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR504 so that it indicates DC 12.15 V ±0.02 V.

**DC −5 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to C, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR501 so that it indicates DC −5.00 V ±0.05 V.

**DC −12 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to D, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR502 so that it indicates DC −12.00 V ±0.05 V.

**DC 12 V MONITOR ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to E, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR503 so that it indicates DC 12.00 V ±0.05 V.

**DC 12 V PROTECT ADJUSTMENT**
1. Connect the amperemeter to 12 V LINE in series.
2. Adjust the VR507 so that it indicates 4.5 A.

**CENTERING ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Circle Pattern appear on the screen.
2. Turn the DY coil to set the Circle Patern to horizontal position and fix it.
3. Adjust the centering magnet so that the Border Size become as shown below ... (Refer to Fig. 1)
   B.D ... 12 mm ±3 mm
4. Adjust 4 pole magnet so that distortion on the screen will disappear and fix it.

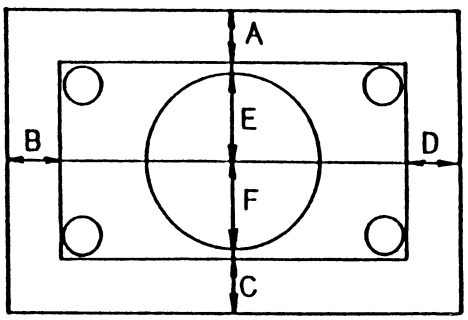


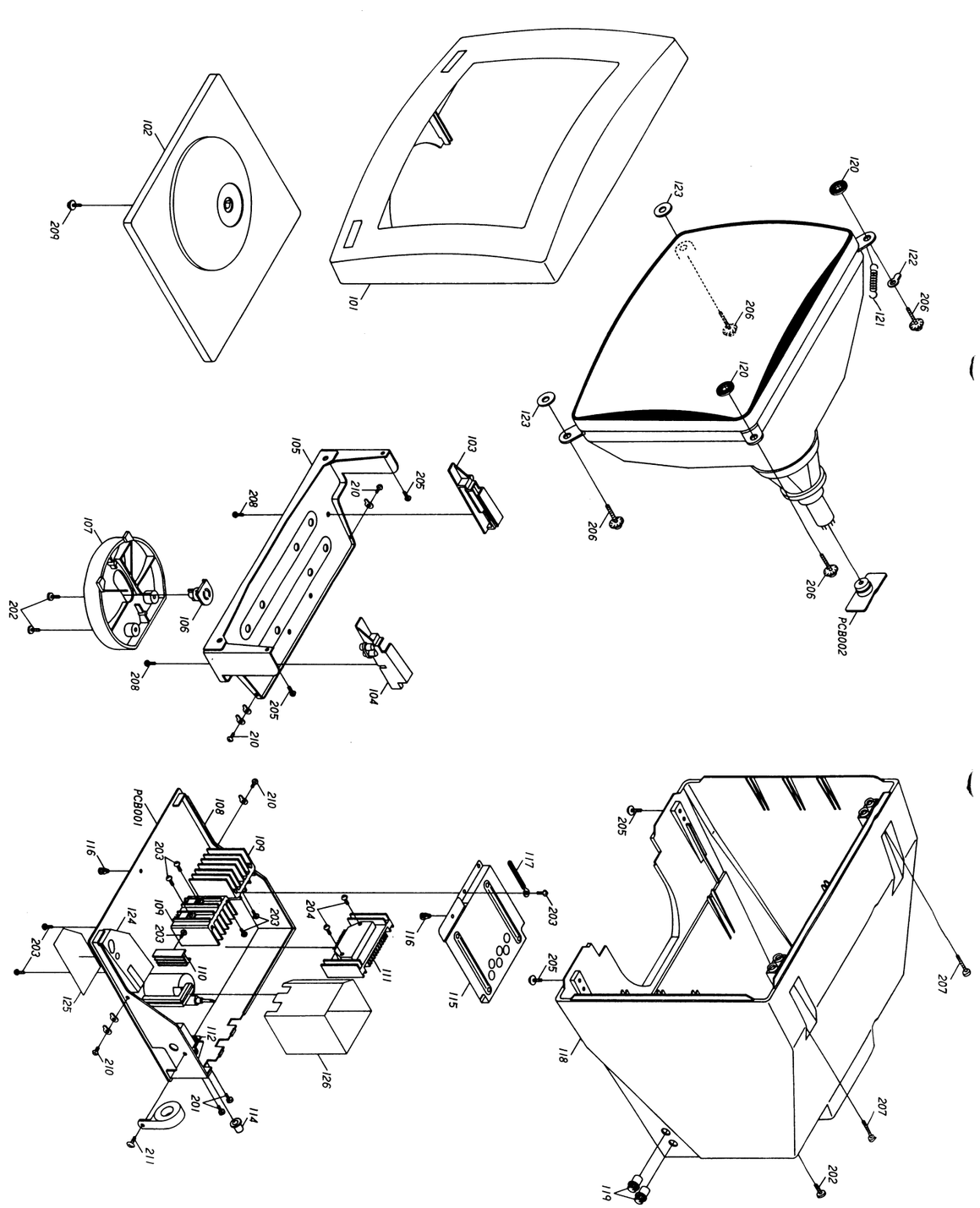

Figure 1

# Ersatzteilliste für PC MM
# Parts List for Model PC MM

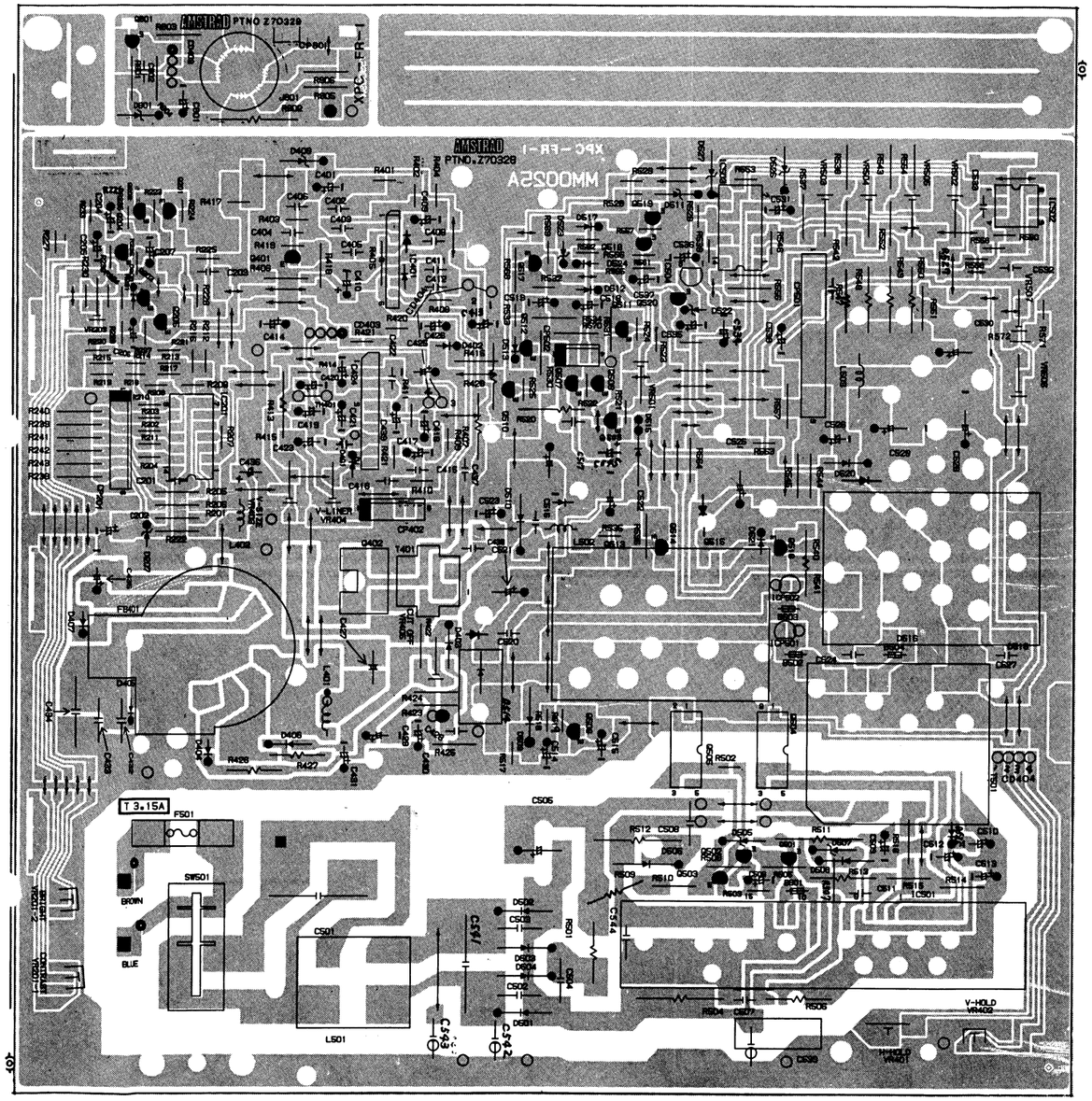
| Best.-Nr.<br>Part-No. | Bezeichnung | Description | Teile-Nr.<br>Part-No. | Zeich.-Pos.<br>Ref.-No. |
|---|---|---|---|---|
| 3490100-431 | Frontrahmen kpl. | CABINET, FRONT ASS'Y | A21403723 | 101 |
| 3490200-431 | Frontrahmen | CABINET, FRONT | 701KPA0070 | |
| 3490300-436 | Schild Modell | PLATE, FRONT (R) | 7230001437 | |
| 3490400-436 | Schild Name | PLATE, FRONT (L) | 7232530030 | |
| 3490500-431 | Gehäusefuß | STAND, BOTTOM | 704KPA0012 | 102 |
| 3490600-4294 | Platinenhalter L | HOLDER, PCB (L) | 762KPA0002 | 103 |
| 3490700-4294 | Platinenhalter R | HOLDER, PCB (R) | 762KPA0001 | 104 |
| 3490900-4294 | Halter Gehäusefuß | HOLDER, STAND | 704KPA0016 | 106 |
| 3491000-431 | Oberteil Gehäusefuß | STAND, TOP | 704KPA0015 | 107 |
| | | SPACER, STAND | 784JPA0010 | |
| 3491100-4282 | Knopf Taste | BUTTON, PUSH | 736KPA0001 | 114 |
| 3491200-4196 | Abschirmblech | PLATE, SHIELD | 752KSA0071 | 115 |
| 3491300-431 | Gehäuse Rückwand | CABINET, BACK | 702KPA0112 | 117 |
| 3491400-4361 | Gehäuse Typenschild | SHEET, RATING | 7220000312 | 118 |
| 3491500-436 | Schild Netzschalter | SHEET, POWER SWITCH | 7230001438 | |
| 3491600-436 | Schild Vert./Hor. Frequenz | SHEET, V.H.HOLD | 7230001440 | |
| 3491700-436 | Schild Hell./Kontr. | SHEET, CONTROL | 7230001441 | |
| 3491800-4281 | Knopf Dreh | KNOB, VOLUME | 732KPA0022 | 119 |
| 3491900-4064 | Scheibe | SHEET, CRT SUPPORT | 800KR00007 | 120 |
| 3492000-4162 | Feder | SPRING, EARTH | 741KUA0012 | 121 |
| 3492100-4064 | Scheibe | WASHER, CRT | 761KSA0113 | 123 |
| | | BIND M 3× 6 CH | 8102230604 | 201 |
| | | BIND M 4× 8 CH | 8102240804 | 202 |
| | | TAP TITE (P) 3×10 CH | 8110630A04 | 203 |
| | | TAP TITE (P) 3×14 CH | 8110130A44 | 204 |
| | | TAP TITE (P) BIND 4×16 CH | 8110240A64 | 205 |
| | | TAP TITE (P) PAN GW14 4×30 CH | 8141140C04 | 206 |
| | | TAP TITE (P) 4×40 CH | 8110140D04 | 207 |
| | | TAPPING (B0) TRUSS 4×10 CH | 8117540A04 | 208 |
| | | TAPPING (B0) WH12 4×20 CH | 8117F40B04 | 209 |
| | | TAP TITE (S) 3× 6 CH | 8107630604 | 210 |
| | | TAP TITE (S) TRUSS 4×10 CH | 8107540A04 | 211 |
| 3492200-214 | Folienbeutel | POLY, BAG | 791KHA0050 | – |
| 3492300-213 | Styropor oben | PACKAGE, TOP | 792KHA0081 | – |
| 3492400-213 | Styropor unten | PACKAGE, BOTTOM | 792KHA0082 | – |
| 3490800-212 | Faltkarton | GIFT BOX | 793KCD0237 | – |



## Mechanical exploded view



## Main P.C.B.




SYMBOL LIST

| | |
|---|---|
| RESISTOR | |
| SEMI-FIXED RESISTOR | |
| CAPACITOR | |
| JUMPER | |



Ersatzteilliste für Monitor MM
Parts List for Model Monitor MM

| Best.-Nr. Part-No. | Bezeichnung | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|
| **IC** | | | | |
| 3201700-302 | IC | TC74HC04 | IC | 155D4HC040 | IC201 |
| 3201000-302 | IC | AN5753 | IC | 101SD57530 | ⚠ IC401 |
| 2654800-302 | IC | UPC1031H2 | IC | 102S010310 | ⚠ IC402 |
| 3492500-302 | IC | STK7358 | IC | 103S073580 | ⚠ IC501 |
| 3492600-302 | IC | BA6993 | IC | 107D069930 | IC502 |
| 2438900-302 | IC | LA6324 | IC | 103D063240 | IC503 |
| 3492700-302 | IC | BA707 | IC | 1079907070 | IC504 |
| **Transistoren / Transistors** | | | | |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q201 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q202 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q203 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q204 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q205 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q401 |
| 2655100-301 | Transistor | 2SD1159 | TRANSISTOR, SILICON | TD30011590 | ⚠ Q402 |
| 1354500-301 | Transistor | 2SC536KNPFT | TRANSISTOR, SILICON | TC3T0536KF | Q501 |
| 1354500-301 | Transistor | 2SC536KNPFT | TRANSISTOR, SILICON | TC3T0536KF | Q502 |
| 2131200-301 | Transistor | 2SA608KNPFT | TRANSISTOR, SILICON | TA3T0608KF | Q503 |
| 3492800-3011 | Optokoppler | TLP580 | PHOTO COUPLER | 0002500030 | Q504 |
| 3492800-3011 | Optokoppler | TLP580 | PHOTO COUPLER | 0002500030 | Q505 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q506 |
| 2131200-301 | Transistor | 2SA608KNPFT | TRANSISTOR, SILICON | TA3T0608KF | Q507 |
| 2131200-301 | Transistor | 2SA608KNPFT | TRANSISTOR, SILICON | TA3T0608KF | Q508 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q509 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q510 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q511 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q512 |
| 3492900-301 | Transistor | 2SB1134R | TRANSISTOR, SILICON | TB3001134R | ⚠ Q513 |
| 1354500-301 | Transistor | 2SC536KNPFT | TRANSISTOR, SILICON | TC3T0536KF | Q514 |
| 3492900-301 | Transistor | 2SB1134R | TRANSISTOR, SILICON | TB3001134R | ⚠ Q515 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q516 |
| 2131200-301 | Transistor | 2SA608KNPFT | TRANSISTOR, SILICON | TA3T0608KF | Q517 |
| 1354500-301 | Transistor | 2SC536KNPFT | TRANSISTOR, SILICON | TC3T0536KF | Q518 |
| 1354500-301 | Transistor | 2SC536KNPFT | TRANSISTOR, SILICON | TC3T0536KF | Q519 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q520 |
| 2654900-301 | Transistor | 2SC2229 Y-Type 6 | TRANSISTOR, SILICON | TC5T022294 | Q801 |
| **Dioden / Diodes** | | | | |
| 0687200-3044 | Z-Diode | MTZ5.1BT-77 | DIODE, ZENER | D97U05R10B | D207 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D208 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D401 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D402 |
| 3493100-3041 | Diode | 11E2TA1 | DIODE, SILICON | D28T011E20 | D403 |
| 3493200-304 | Diode | 10ELS4-TA-1 | DIODE, RECTIFIER | D28T0ELS40 | D404 |
| 3493200-304 | Diode | 10ELS4-TA-1 | DIODE, RECTIFIER | D28T0ELS40 | D405 |
| 3493300-3041 | Diode | 11E1TA1-T | DIODE, SILICON | D28T011E10 | D406 |
| 3493200-304 | Diode | 10ELS4-TA-1 | DIODE, RECTIFIER | D28T0ELS40 | D407 |
| 2135000-3044 | Z-Diode | GZA6.2 Y BT | DIODE, ZENER | D93T06R20Y | D408 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D409 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D410 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D501 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D502 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D503 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D504 |
| 3493400-3044 | Z-Diode | GZB18B | DIODE, ZENER | D93011801B | D505 |
| 3493500-304 | Diode | DFC15L-KC5 | DIODE, RECTIFIER | D231DFC15L | D506 |
| 3493600-3044 | Z-Diode | GZB9.1B | DIODE, ZENER | D93019R11B | D507 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECITFIER | D23FDFH10G | D508 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | D509 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | ⚠ D510 |
| 3493800-3044 | Z-Diode | GZA18 Y BT | DIODE, ZENER | D93T01800Y | D511 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D512 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D513 |
| 3202100-3041 | Diode | 30DF2-FIN | DIODE, SILICON | D28L30DF20 | ⚠ D514 |
| 3493900-304 | Diode | DSF-10B-BT | DIODE, RECTIFIER | D23TDSF10B | D515 |
| 3494000-304 | Diode | F5KQ60 | DIODE, SCHOTTKY BARRIE | D28A5KQ600 | ⚠ D516 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D517 |
| 3494100-304 | Diode | F10PO4Q | DIODE, SCHOTTKY BARRIE | D28A0P04Q0 | ⚠ D518 |
| 2655500-3041 | Diode | DS442X-BT | DIODE, SILICON | D13TDS442X | D520 |

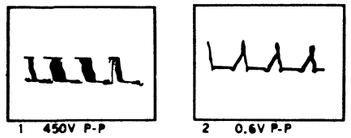
| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| 3493000-3041 | Doide | 1SS132T-77 | DIODE, SILICON | D17T001320 | D521 |
| 0687200-3044 | Z-Doide | MTZ5.1BT-77 | DIODE, ZENER | D97U05R10B | D522 |
| 3494200-3044 | Z-Doide | MTZ5.6BT-77 | DIODE, ZENER | D97U05R60B | D523 |
| 3493000-3041 | Doide | 1SS132T-77 | DIODE, SILICON | D17T001320 | D524 |
| 3493000-3041 | Doide | 1SS132T-77 | DIODE, SILICON | D17T001320 | D525 |
| 3493800-3044 | Z-Doide | GZA18 Y BT | DIODE, ZENER | D93T01800Y | D526 |
| 3493800-3044 | Z-Doide | GZA18 Y BT | DIODE, ZENER | D93T01800Y | D527 |
| 3493000-3041 | Doide | 1SS132T-77 | DIODE, SILICON | D17T001320 | D528 |
| 3493000-3041 | Doide | 1SS132T-77 | DIODE, SILICON | D17T001320 | D529 |
| 2655500-3041 | Doide | DS442X-BT | DIODE, SILICON | D13TDS442X | D530 |
| 2655500-3041 | Doide | DS442X-BT | DIODE, SILICON | D13TDS442X | D531 |
| 2655600-3044 | Z-Doide | RD56FB | DIODE, ZENER | D92015600B | D801 |
| **Widerstände / Resistors** | | | | | |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R238 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R239 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R240 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R241 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R242 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01222750J | R243 |
| 1486100-3217 | Sich.-Widerstand | 39 ¼ W | R, FUSE | R61584390J | ⚠ R406 |
| 3494400-321 | Metallschiwi | 100 1 W | R, METAL OXIDE | R31181101J | ⚠ R407 |
| 3206500-321 | Metallschiwi | 1 1 W | R, METAL OXIDE | R31181010J | ⚠ R415 |
| 3207200-3217 | Sich.-Widerstand | 22 ½ W | R, FUSE | R61582220J | ⚠ R426 |
| 3253000-3217 | Sich.-Widerstand | 1 ½ W | R, FUSE | R63582010J | ⚠ R427 |
| 3494500-321 | Metallschiwi | 470 1 W | R, METAL OXIDE | R31181471J | R428 |
| 3494600-3219 | Widerstand | 5.6 5 W | R, CEMENT | R512AD5R6J | ⚠ R501 |
| 3206900-321 | Metallschiwi | 0.33 2 W | R, METAL OXIDE | R3118AR33J | ⚠ R504 |
| 2659900-321 | Metallschiwi | 1 K 1 W | R, METAL OXIDE | R31181102J | ⚠ R506 |
| 3494700-321 | Metallschiwi | 82 K 1 W | R, METAL OXIDE | R30301823J | R509 |
| 3494800-321 | Metallschiwi | 56 2 W | R, METAL OXIDE | R3118A560J | R511 |
| 3494900-321 | Metallschiwi | 22 K 3 W | R, METAL OXIDE | R3128B223J | R512 |
| 3495000-321 | Metallschiwi | 2.2 K 1 W | R, METAL OXIDE | R3D301222J | ⚠ R513 |
| 1862600-3217 | Sich.-Widerstand | 1 K ¼ W | R, FUSE | R63584102J | ⚠ R515 |
| 3228600-3217 | Sich.-Widerstand | 10 ¼ W | R, FUSE | R61584100J | ⚠ R516 |
| 3495100-321 | Metallschiwi | 47 1 W | R, METAL OXIDE | R31181470J | R520 |
| 3495200-321 | Metallschiwi | 56 1 W | R, METAL OXIDE | R31181560J | ⚠ R541 |
| 3495300-321 | Metallschiwi | 0.22 ½ W | R, METAL OXIDE | R31202R22J | R544 |
| 3495300-321 | Metallschiwi | 0.22 ½ W | R, METAL OXIDE | R31202R22J | R545 |
| 3495400-321 | Metallschiwi | 0.22 1 W | R, METAL OXIDE | R31181R22J | R547 |
| 3495400-321 | Metallschiwi | 0.22 1 W | R, METAL OXIDE | R31181R22J | R548 |
| 3495400-321 | Metallschiwi | 0.22 1 W | R, METAL OXIDE | R31181R22J | R549 |
| 3495400-321 | Metallschiwi | 0.22 1 W | R, METAL OXIDE | R31181R22J | R550 |
| 3207100-321 | Metallschiwi | 4.7 K 2 W | R, METAL OXIDE | R3D30A472J | ⚠ R802 |
| **Kondensatoren / Capacitors** | | | | | |
| 3248800-3O7 | Elko | 1000 µF 10 V | CE | E02101102M | C425 |
| 1133000-3O7 | Elko | 10 µF 25 V | CE | E0B903100M | C427 |
| 3207800-311 | Foko | 0.1 µF 250 V | CMP | P211G3104K | C428 |
| 3495500-3O7 | Elko | 2.2 µF 160 V | CE | E011FB2R2M | C429 |
| 3495600-311 | Foko | 0.0056 µF 630 V | CPP | P34105562J | C432 |
| 3495700-311 | Foko | 0.0047 µF 630 V | CPP | P34105472J | C433 |
| 3495800-311 | Foko | 0.027 µF 400 V | CPP | P34104273J | C434 |
| 1144000-3O7 | Elko | 220 µF 35 V | CE | E0B104221M | C435 |
| 3495900-311 | Foko | 0.22 µF AC 250 V | CMPL | P614FB224M | C501 |
| 2664600-314 | Kerko | 0.0022 µF 2 KV B | CC | C02BB07H3K | C502 |
| 2664600-314 | Kerko | 0.0022 µF 2 KV B | CC | C02BB07H3K | C503 |
| 2664600-314 | Kerko | 0.0022 µF 2 KV B | CC | C02BB07H3K | C504 |
| 3496000-3O7 | Elko | 150 µF 400 V | CE | E03L0H151M | C505 |
| 3496100-314 | Kerko | 0.01 µF 1 KV B | CC | C02BB0614K | C508 |
| 3496200-314 | Kerko | 0.0056 µF 500 V B | CC | C020B05S3K | C516 |
| 0590000-3O7 | Elko | 330 µF 35 V | CE | E02QG4331M | C517 |
| 3496200-314 | Kerko | 0.0056 µF 500 V B | CC | C020B05S3K | C520 |
| 1133400-3O7 | Elko | 1000 µF 25 V | CE | E02QG3102M | C521 |
| 0354300-3O7 | Elko | 470 µF 16 V | CE | E02QG2471M | C522 |
| 3481600-314 | Kerko | 0.0015 µF 500 V B | CC | C02BB05E3K | C524 |
| 0587600-3O7 | Elko | 3300 µF 35 V | CE | E02SG4332M | C525 |
| 3496200-314 | Kerko | 0.0056 µF 500 V B | CC | C020B05S3K | C527 |
| 3496300-3O7 | Elko | 3300 µF 16 V | CE | E02HG2332M | C528 |
| 3496300-3O7 | Elko | 3300 µF 16 V | CE | E02HG2332M | C529 |
| 0323500-3O7 | Elko | 1000 µF 16 V | CE | E02QG2102M | C530 |
| 2664900-314 | Kerko | 2200 pF 4 KV | CC | C010D09H3M | ⚠ C539 |
| 3496400-314 | Kerko | 680 pF 50 V SL | CC | C0B0SL4U2K | C540 |





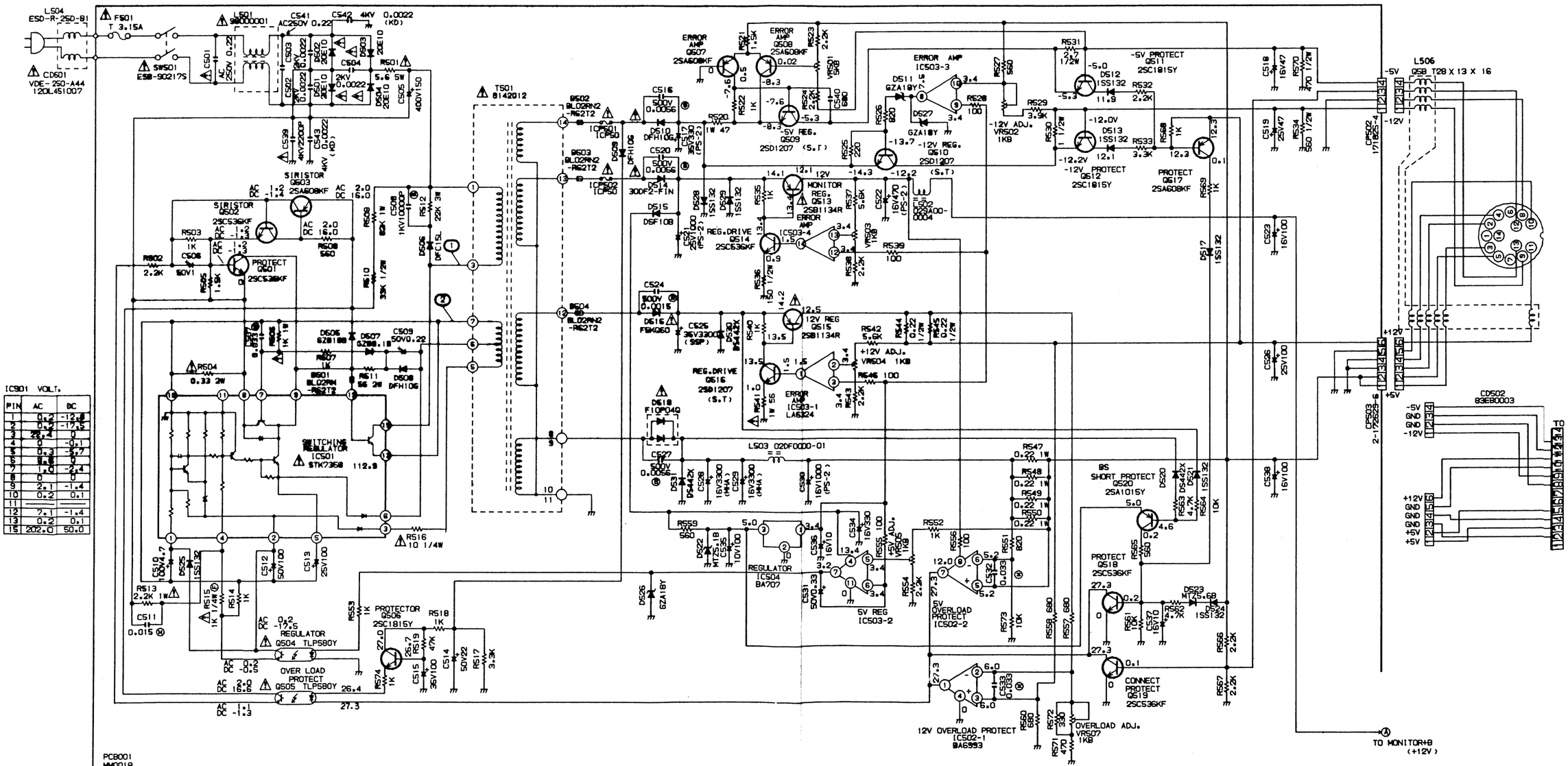
| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| 3495900-311 | Foko | 0.22 µF AC 250 V | CMPL | P614FB224M | C541 |
| 2664900-314 | Kerko | 0.0022 µF 4 KV | CC | CA30E09H3K | C542 |
| 2664900-314 | Kerko | 0.0022 µF 4 KV | CC | CA30E09H3K | C543 |
| 3496500-314 | Kerko | 390 pF 2 KV B | CC | C010B07N2K | C544 |
| **Spulen und Transformatoren / Coils and Transformers** | | | | | |
| 3202500-3253 | Spule | 21000006 | COIL, LINEARITY | 0221000006 | L401 |
| 3202400-3251 | Spule | 100µH 1451MM | COIL, INDUCTOR | 021H66100K | L402 |
| 3496600-3252 | Spule | RB-20871 | COIL, LINE FILTER | 0298000001 | ⚠ L501 |
| 3496700-3253 | Spule | 02DX000001 | COIL | 02DX000001 | L502 |
| 3496800-3253 | Spule | SN5-2002 | COIL | 02DF000001 | L503 |
| 3202600-3243 | Trafo Hor. | RB-20852 | TRANS, HORIZONTAL DRIVE | 045017001E | T401 |
| 3496900-3244 | Trafo Schaltnetzteil | 8142012 | TRANSFORMER, SWITCHING | 048142012G | T501 |
| 3497000-3253 | Ablenkspule | | DY | 0271011403 | DY401 |
| **Verschiedenes / Miscellaneous** | | | | | |
| 3497100-3231 | Poti 10 K | | VR, ROTARY | V029200002 | VR201 |
| 3497200-3231 | Poti 30 K | | VR, ROTARY | V028034B01 | VR402 |
| 3497300-502 | Platine Monitor | | PCB | 13MM0025AB | PCB001 |
| 3497400-502 | Platine Bildröhre | | PCB | 13MS0065AB | PCB002 |
| 3497500-3272 | Netzschalter | | SWITCH, PUSH | 0530105005 | ⚠ SW501 |
| 3497600-3328 | Sockel Bildröhre | | SOCKET, CATHORD RAY TUBE | 066F010001 | ⚠ J801 |
| 3497700-360 | Bildröhre | | TUBE CATHODE RAY | 090G140408 | ⚠ V801 |
| 0606400-3301 | Sicherung 3.15 AT | | FUSE 3.15 AT | 0809T3R101 | ⚠ F501 |
| 3202800-3244 | Trafo Zeilen | | TRANSFORMER FLYBACK | 0420140011 | ⚠ FB401 |
| 3497800-302 | Sicherungs IC | | IC PROTECTOR N50 | 0847000202 | ⚠ ICP501 |
| 3497800-302 | Sicherungs IC | | IC PROTECTOR N50 | 0847000202 | ⚠ ICP502 |
| 3204400-301 | Thermistor | | THERMISTOR | DS3A5G102L | TH401 |
| 3497900-341 | Kabel RGB | | CORD DIN | 0683EB0004 | CD201 |
| 3498000-341 | Netzkabel | | CORD AC | 120L451007 | ⚠ CD501 |
| 3498100-341 | Kabel DC | | CORD DIN | 0683EB0003 | CD502 |
| 3498200-3323 | Buchse | | CONNECTOR PCB SIDE | 0694190019 | CP201 |

# Chassis schematic diagram MM










IC901 VOLT.

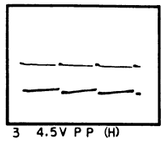
| PIN | AC | DC |
|---|---|---|
| 1 | 0.2 | -12.8 |
| 2 | 0.2 | -17.5 |
| 3 | 28.4 | 0 |
| 4 | 0 | -0.1 |
| 5 | 0.3 | -1.7 |
| 6 | 0.3 | -1.7 |
| 7 | 1.0 | -2.4 |
| 8 | 0 | 0 |
| 9 | 2.1 | -1.4 |
| 10 | 0.2 | 0.1 |
| 11 | — | — |
| 12 | 2.1 | -1.4 |
| 13 | 0.2 | 0.1 |
| 15 | 202.0 | 50.0 |

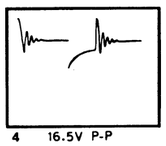
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

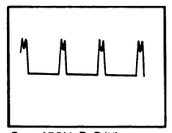
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

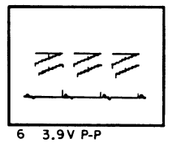
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

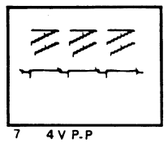
# Chassis schematic diagram MM

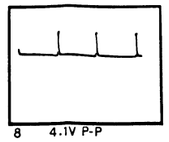

3 4.5V P P (H)

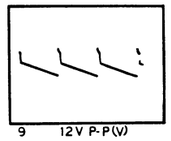

4 16.5V P-P

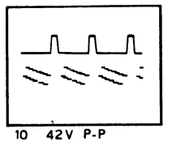

5 150V P-P(H)


6 3.9V P-P


7 4 V P-P


8 4.1V P-P


9 12V P-P(V)


10 42V P-P

IC201 VOLTAGE

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 0.4 | 7 | 0 | 10 | 3.3 | 13 | 0.8 | | | | |
| 2 | 4.7 | 5 | 2.8 | 8 | 3.3 | 11 | 0.8 | 14 | 1.9 | | | | |
| 3 | 3.9 | 6 | 0.01 | 9 | 0.8 | 12 | 3.3 | | | | | | |



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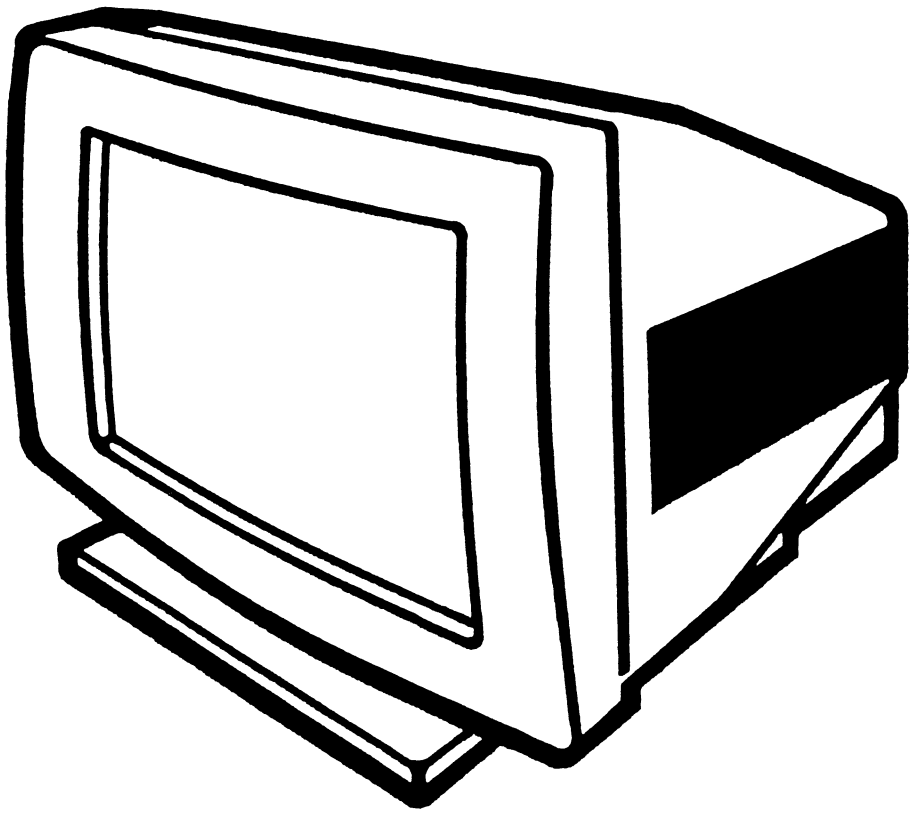
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

# COLOUR MONITOR

# MODEL PC-CM



# Major components location guide

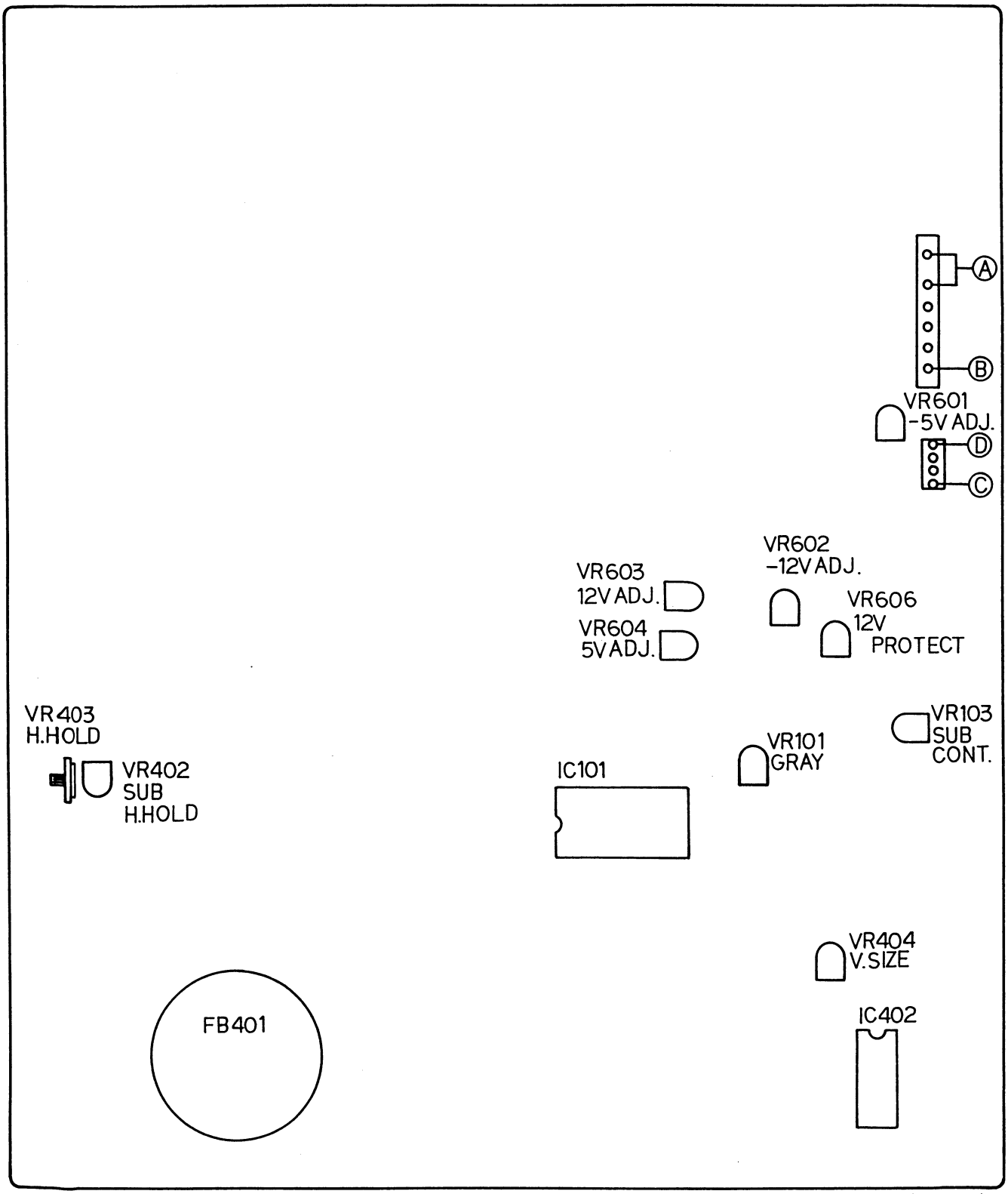



Figure A

# Abgleichanweisung
# ALIGNMENT INSTRUCTIONS

**5 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt A anschließen.
2. Mit VR604 auf 5.1 V DC ±0.02 V einstellen.

**12 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt B anschließen.
2. Mit VR603 auf 12.15 V DC ±0.02 V einstellen.

**−5 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt C anschließen.
2. Mit VR601 auf −5 V DC ±0.05 V einstellen.

**−12 V DC Einstellung**
1. Digitalvoltmeter an Meßpunkt D anschließen.
2. Mit VR602 auf −12 V DC ±0.05 V einstellen.

**? V DC Schutzschaltung**
1. Schließen Sie in Reihe zur +12 V DC-Leitung ein Amperemeter, sowie einen Lastwiderstand mit ca. 35 Watt gegen Masse. Dieser Widerstand muß so gewählt sein, daß der Strom ca. 4,5 A−4,6 A beträgt.
2. Mit Regler VR606 die Schutzschaltung so einstellen, daß sie bei dieser Belastung noch nicht anspricht.

**Focus-Einstellung**
1. Laden Sie die VDU Testsoftware (F3) und starten Sie die Zeichendarstellung F1.
2. Mit Focusregler am Zeilentrafo auf maximale Bildauflösung einstellen.

**Bildhöheneinstellung**
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Kreis-Testbild (o).
2. Mit Regler VR404 das Testbild wie in Abbildung 1 einstellen.

**DC 5 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to A, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR604 so that it indicates DC 5.10 V ±0.02 V.

**DC 12 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to B, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR603 so that it indicates DC 12.15 V ±0.02 V.

**DC −5 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to C, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR601 so that it indicates DC −5.00 V ±0.05 V.

**DC −12 V ADJUSTMENT**
1. Connect the hot of the Digital voltmeter to D, and the cold to ground. (Refer to Fig. A)
2. Adjust the VR602 so that it indicates DC −12.00 V ±0.05 V.

**DC 12 V PROTECT ADJUSTMENT**
1. Connect the amperemeter to 12 V LINE in series.
2. Adjust the VR606 so that it indicates 4.5 A.

**FOCUS ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Character Pattern appear on the screen.
2. Turn the FOCUS volume counter-clockwise fully and nextly turn it clockwise until just focus position.

**V. SIZE ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Circle Pattern appear on the screen.
2. Adjust the VR404 so that the Border Size become as shown below. (Refer to Fig. 1)

A.C ... 12 mm ±3 mm
B.C ... 12 mm ±3 mm

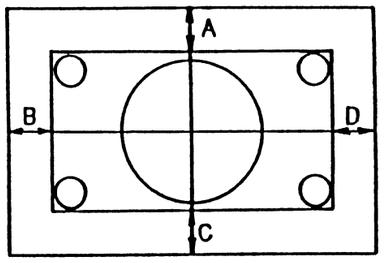



Figure 1



Abgleichanweisung
ALIGNMENT INSTRUCTIONS

**Grauabgleich**
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Farbbalken Testbild (F7).
2. Oszilloskop an Kollektor von Transistor Q802 anschließen.
3. Helligkeitsregler (VR102−2) auf maximum.
4. Mit Regler VR101 den Grauwert auf 27% vom Weißpegel einstellen.

**GRAY ADJUSTMENT**
1. Insert the VDU TEST floppy disk into PC-1512 and make the Color Bar Pattern appear on the screen.
2. Connect the oscilloscope to the collector of Q802 and make the waveform appear.
3. Set the Bright (VR102−2) to maximum position.
4. Adjust the VR101 so that the gray level of waveform become 27% if the intensity white level of waveform is 100% against black. (Refer to Fig. 2)

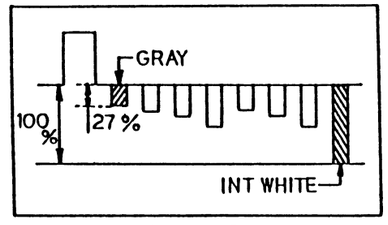



Figure 2

**Horizontalfrequenz-Einstellung**
1. Steuern Sie den Monitor mit keinem Signal an (Turn Video off).
2. Frequenzzähler an Kollektor von Transistor Q404 anschließen.
3. Regler H-Hold auf Rechtsanschlag.
4. Mit Regler VR402 auf 14,5 KHz einstellen.
5. Mit Regler VR403 auf 15,7 KHz einstellen.

**SUB H-HOLD AND H-HOLD ADJUSTMENT**
1. Shut off the input signal and set the screen to the free-run condition.
2. Connect frequency counter to CRT heater.
3. Rotate H-Hold control fully counter-clockwise.
4. Adjust VR402 to obtain 14,500 Hz reading.
5. Adjust VR403 to obtain 15,700 Hz reading.

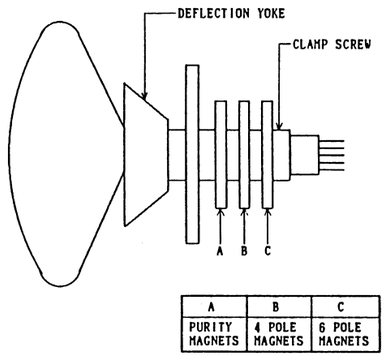
**Schwarz-Weiß-Abgleich**
Diese Einstellung ist notwendig, um die Bildröhre an die R-G-B-Endstufe anzupassen. Es wird dadurch eine gute Schwarzweißwiedergabe bei jeder Helligkeit erreicht.
Vor der nachfolgenden Einstellung muß das Gerät mind. 10 Minuten in Betrieb sein.
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild „weiß" (w).
2. Stellen Sie die Regler VR804 (rot) und VR805 (blau) auf Mittelstellung.
3. Stellen Sie die Regler VR802 (grün), VR801 (rot) und VR803 (blau) auf Linksanschlag.
4. Serviceschalter auf Servicestellung! Mit Helligkeitsregler die Spannung am Kollektor Q805 auf 120 V DC einstellen (Messung mit Oszilloskop).
5. Screen-Regler auf Linksanschlag, dann Screen-Regler so einstellen, daß eine dunkle Linie sichtbar wird.
6. Mit Regler VR802 (grün), VR801 (rot) und VR803 (blau) die dunkle Linie so einstellen, daß sie weiß erscheint.
7. Serviceschalter auf Normalstellung.
8. Mit Regler VR804 (rot) und VR805 (blau) wenn erforderlich die Verstärkung der Blau- und Rot-Endstufe nachstellen, so daß ein weißes Bild entsteht. Wiederholen Sie evtl. die vorigen Schritte.

**BLACK AND WHITE TRACKING**
The purpose of this procedure is to adjust the biases applied to the picture tube to obtain good black and white picture production at all brightness levels while, at the same time achieving maximum useable brightness. Proper RF AGC control adjustment should have been verified prior to performing this procedure.
1. Insert the VDU TEST floppy disk into PC-1512 and make the White Box Monitor Pattern appear on the screen.
2. Rotate the Red (VR804) and Blue (VR805) Drive controls fully CW and then back CCW to the center of their rotation ranges.
3. Rotate the Green (VR802), Red (VR801) and Blue (VR803) Cut off controls to the fully CCW end of their rotation ranges.
4. Set normal-service switch to service position. Adjust the voltage of test point (collector of green output transistor on CRT PCB) to DC 120 with brightness control. Voltage measurement should be measured with an oscilloscope.
5. Rotate the screen control to the fully CCW end of its rotation range. Then, rotate it CW until a dim line of one pronounced color (green, red or blue) is obtained.
6. The other two color Cot off controls must be rotated CW until a dim white line is obtained.
7. Set normal-service switch to normal position.
8. If required, touch-up adjustment of the Red (VR804) and Blue (VR805) Drive controls to produce a uniform monochrome picture.

# Abgleichanweisung
# ALIGNMENT INSTRUCTIONS

**Farbreinheitseinstellung**
Das Gerät muß vor dieser Einstellung mind. 10 Minuten in Betrieb sein.
1. Prüfen Sie die richtige Lage aller Ablenkkomponenten (siehe Abb. 3).
2. Stellen Sie die Konvergenz in der Bildmitte ein, wie es bei der Konvergenz-Abgleichanweisung erklärt ist.
3. Kontrastregler auf Linksanschlag und Helligkeitsregler so einstellen, daß das Bild nicht verzerrt.
4. Laden Sie die VDU-Software (F3) und starten Sie das Grün-Bild (F9 und mehrmals Leertaste betätigen).
5. Befestigungsschrauben der Ablenkeinheit lösen.
6. Beginnen Sie diese Einstellung mit den Purity-Magneten, so daß in der Bildmitte ein gleichmäßiges grünes entsteht.
7. Ablenkeinheit auf dem Bildröhrenhals verschieben, bis das .... auf dem ganzen Bild gleichmäßig grün ist.
   WICHTIG: Die Farbreinheit in der Bildmitte wird durch die Purity-Magnete, die Farbreinheit des gesamten Bildes durch verschieben der Ablenkeinheit eingestellt.
8. Überprüfen Sie die Farbreinheit bei den Farben Rot und Blau, indem Sie das Testbild durch Betätigen der Leertaste auf rot bzw. blau weiterschalten.
   Wiederholen Sie eventuell die vorigen Schritte.
   Ablenkeinheit durch Schraube befestigen.

**COLOR PURITY ADJUSTMENT**
The receiver must have been operating 10 minutes prior to this procedure and the face plate of the CRT must be at room temperature. The following procedure is ecommended while using a Dot/Bar Generator.
1. Check for correct location of all neck components. (Refer to Fig. 3)
2. Rough-in the static convergence at the center of the CRT, as explained in the static convergence.
3. Rotate the contrast control to maximum CCW position and rotate brightness control as far CW as possible without causing the picture to „bloom".
4. Rotate the Red (VR801) and Blue (VR803) Cut off controls to maximum CCW position. Rotate the Green (VR802) Cut off control sufficiently in a CW direction to produce a green raster.
5. Loosen the deflection yoke clamp screw and pull the deflection yoke toward the rear of the CRT.
6. Begin the following adjustment with the tabs on the round purity magnet rings set together, slowly separate the two tabs while at the same time rotating them to adjust for a uniform green stripe at the center of the CRT screen.
7. Carefully slide the deflection yoke forward to achieve green (uniform green screen).
   NOTE: Center purity is obtained by adjusting the tabs on the round purity magnet rings, outer edge purity is obtained by sliding the deflection yoke forward.
8. Check for red and blue field purity by reducing the output of the Green (VR802) Cut off control and alternately increasing output of Red (VR801) and Blue (VR803) Cut off controls and touch up adjustments, if required.
9. Tighten deflection yoke clamp screw.




| A | B | C |
|---|---|---|
| PURITY MAGNETS | 4 POLE MAGNETS | 6 POLE MAGNETS |

Figure 3 Picture Tube Neck Component Location



Abgleichanweisung
ALIGNMENT INSTRUCTIONS

**Konvergenzeinstellung**
Der Empfänger muß vor dieser Einstellung mind. 10 Minuten in Betrieb sein.
1. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild F9.
2. Sicherungsring durch linksdrehen lösen.
3. Mit den Purity Magnets durch gegenseitiges bzw. gleichzeitiges drehen die Bildlage und äußere Konvergenz einstellen.
4. Mit den 4-Pole-Magnets die horizontale und vertikale Konvergenz einstellen.
5. Mit den 6-Pole-Magnets die blau horizontale und vertikale Konvergenz einstellen.
6. Befestigungsring durch rechtsdrehen sichern.

**Dynamische Farbbilddeckungseinstellung**
Dynamische Farbbilddeckung (Konvergenz der drei Farbfelder an den Rändern des CRT-Schirmes) wird durchgeführt mittels genauer Einführung und Positionierung von drei Gummikeilen zwischen der Ecke des Ablenkungsspulenjochs und dem Trichter der CRT (Kathodenstrahlröhre). Dies wird wie folgt durchgeführt:
1. Schalten Sie den Empfänger ein (ON) und lassen Sie ihn 15 Minuten lang anwärmen.
2. Laden Sie die VDU-Testsoftware (F3) und starten Sie das Testbild F9.
3. Kippen Sie das Ablenkungsspulenjoch hinauf oder hinunter und setzen Sie die Kipp-Einstellkeile (1) und (2) ein zwischen Ablenkungsspulenjoch und CRT, bis die Mißkonvergenz, beschrieben in Abbildung (A), korrigiert ist.
4. Kippen Sie das Ablenkungsspulenjoch rechts und links und setzen Sie den Kipp-Einstellkeil (3) zwischen Ablenkungsspulenjoch und CRT ein, bis die in Abbildung (B) gezeigte Mußkonvergenz korrigiert ist.
5. Ändern Sie wechselseitig den Freiraum dazwischen und die Tiefe des Einsatzes der drei Keile, bis eine gute Farbbilddeckungseinstellung erreicht ist.
6. Verwenden Sie einen guten Kleber, um jeden der drei Keile sicher an der Bildröhre zu befestigen.
7. Prüfen Sie die Farbreinheit und stellen Sie nach, wenn notwendig.

**STATIC CONVERGENCE ADJUSTMENT**
1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Connect the output of a Crosshatch Generator to the receiver and, concentrating on the center of the CRT screen, proceed as follows:
a. Locate a pair of 4 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue lines.
b. After completing red and blue center convergence, locate the pair of 6 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue (magenta) and green lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue (magenta) and green lines.

**DYNAMIC CONVERGENCE ADJUSTMENT**
Dynamic convergence (convergence of the three color fields at the edges of the CRT screen) is accomplished by proper insertion and positioning of three rubber wedges between the edge of the deflection yoke and the tunnel of the CRT. This is accomplished in the following manner.
1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Apply crosshatch pattern from Dot/Bar Generator to receiver. Observ spacing between lines around edges of CRT screen.
3. Tilt the deflection yoke up or down, and insert tilt adjustment wedges (1) and (2) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 4 (A) has been corrected.
4. Tilt the deflection yoke right and left, and insert tilt adjustment wedge (3) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 4 (B) has been corrected.
5. Alternately change spacing between, and depth of insertion of the three wedges proper dynamic convergence is obtained.
6. Use a strong adhesive tape to firmly secure each of the three wedges to the funnel of the CRT.
7. Check purity and read just, if necessary.

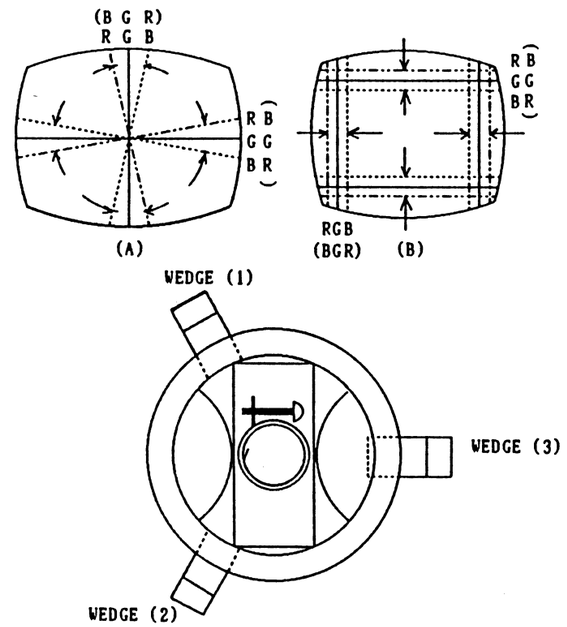


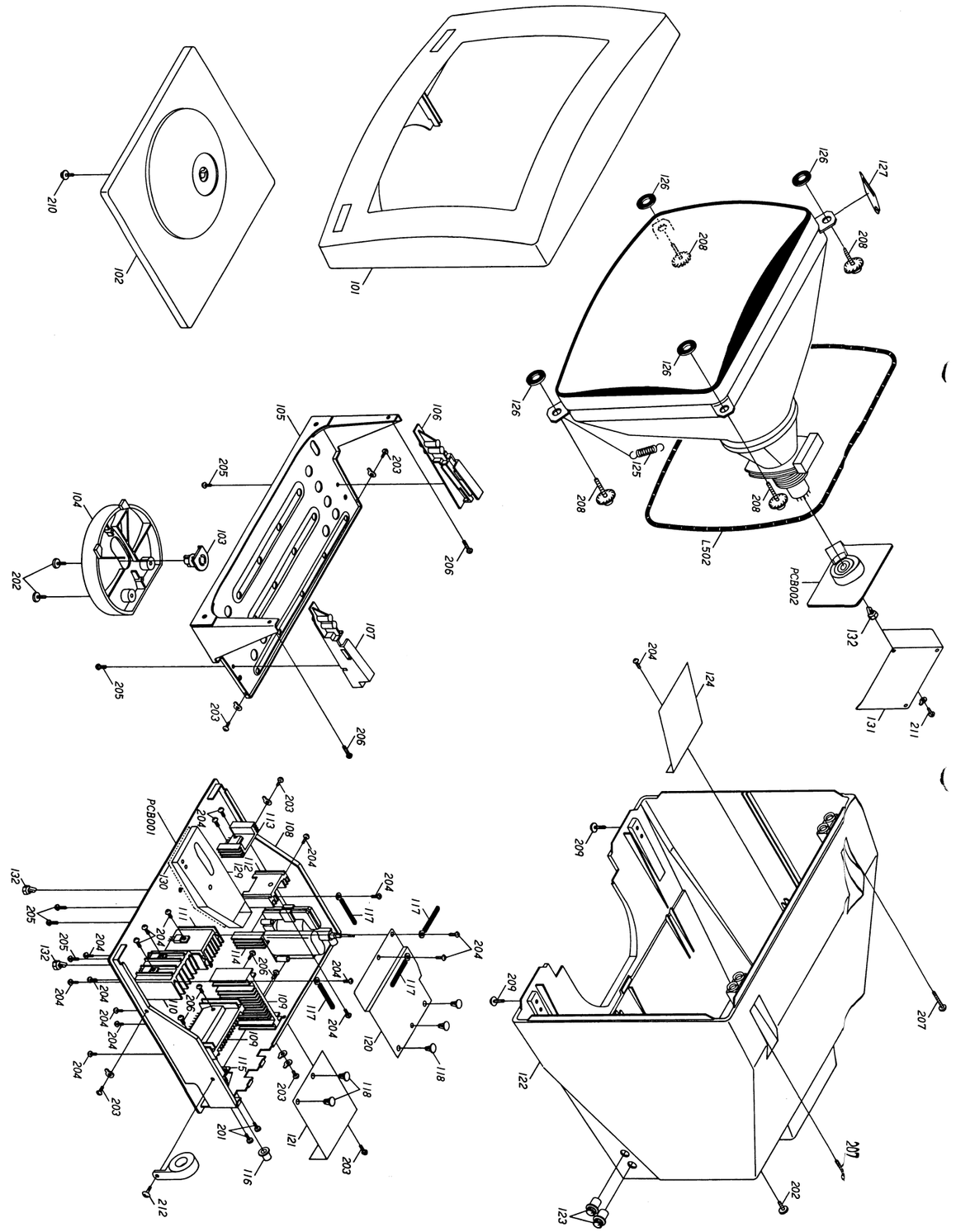

Figure 4 Dynamic Convergence Adjustment

# Ersatzteilliste für PC CM
# Parts List for Model PC CM

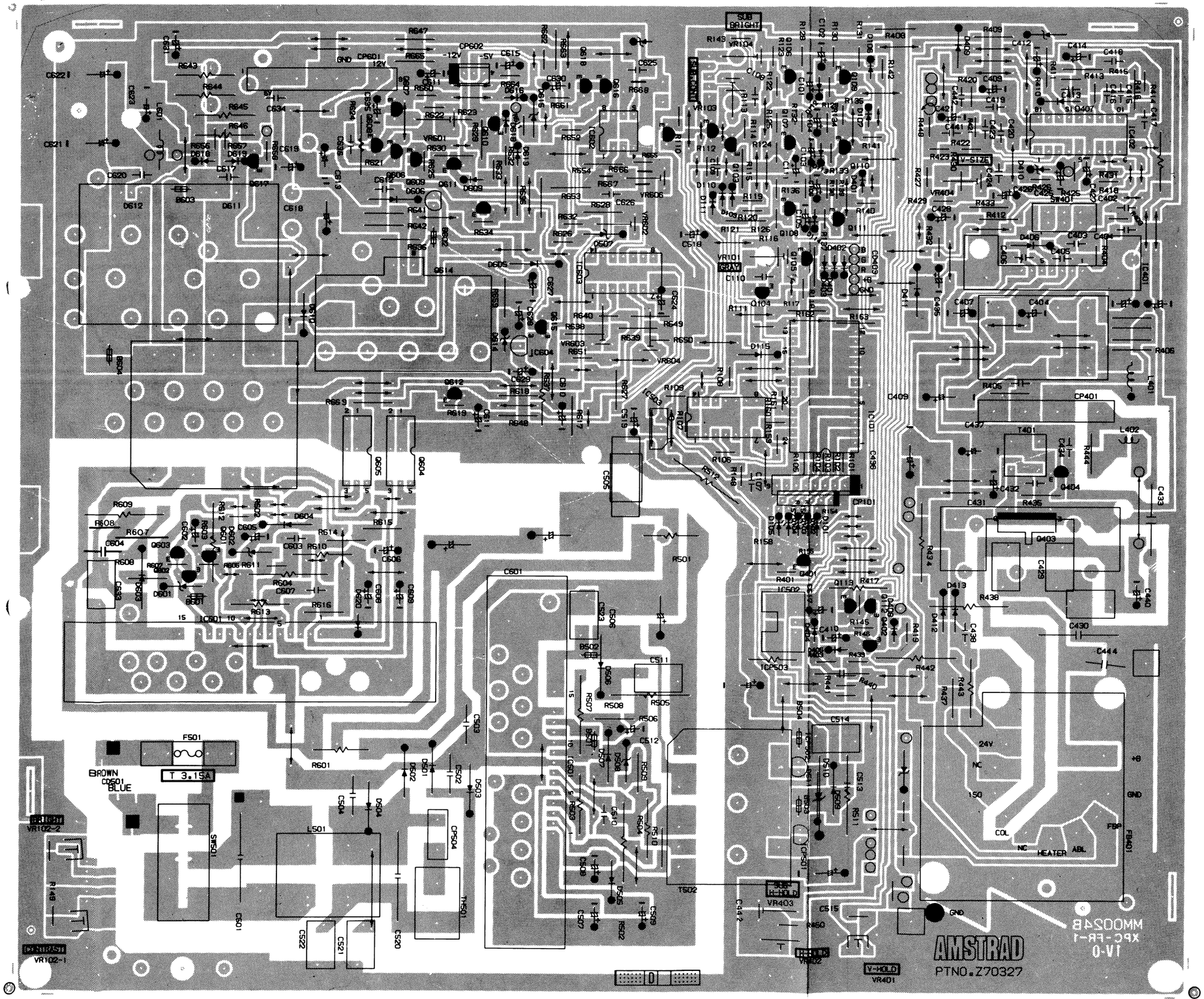
| Best.-Nr.<br>Part-No. | Bezeichnung | Description | | Teile-Nr.<br>Part-No. | Zeich.-Pos.<br>Ref.-No. |
|---|---|---|---|---|---|
| 3485100-431 | Frontrahmen kpl. | CABINET, FRONT ASS'Y | | A21303723 | 101 |
| 3485200-431 | Frontrahmen | CABINET, FRONT | | 701KPA0068 | |
| 3485300-436 | Schild Modell | PLATE, FRONT (R) | | 7230001436 | |
| 3485400-436 | Schild Name | PLATE, FRONT (L) | | 7232530026 | |
| | | SHEET, FRAME BOTTOM | | 755KNA0003 | |
| 3490500-431 | Gehäusefuß | STAND,BOTTOM | | 704KPA0012 | 102 |
| 3490900-4294 | Halter Gehäusefuß | HOLDER, STAND | | 704KPA0016 | 103 |
| 3491000-431 | Oberteil Gehäusefuß | STAND, TOP | | 704KPA0015 | 104 |
| 3485500-4294 | Platinenhalter L | HOLDER, PCB (L) | | 762KPA0003 | 106 |
| 3485600-4294 | Platinenhalter R | HOLDER, PCB (R) | | 762KPA0004 | 107 |
| 3491100-4282 | Knopf Taste | BUTTON, PUSH | | 736KPA0001 | 116 |
| 3485700-431 | Gehäuse Rückwand | CABINET, BACK | | 702KPA0108 | 122 |
| 3485800-4361 | Typenschild | SHEET, RATING | | 7220000313 | |
| 3491500-436 | Schild Netzschalter | SHEET, POWER SWITCH | | 7230001438 | |
| 3491600-436 | Schild Vert./Hor. Frequenz | SHEET, V. H. HOLD | | 7230001440 | |
| 3491700-436 | Schild Hell./Kontr. | SHEET, CONTROL | | 7230001441 | |
| 3491800-4281 | Knopf Dreh | KNOB, VOLUME | | 732KPA0022 | 123 |
| 3485900-4162 | Feder | SPRING, CRT EARTH | | 741KUA0028 | 125 |
| 3486000-4064 | Scheibe | SHEET, CRT SUPPORT | | 800KR00009 | 126 |
| | | BIND | M3× 6 CH | 8102230604 | 201 |
| | | BIND | M4× 8 CH | 8102240804 | 202 |
| | | TAP TITE (S) | 3× 6 CH | 8107630604 | 203 |
| | | TAP TITE (P) | 3×10 CH | 8110630A04 | 204 |
| | | TAP TITE (P) | 3×10 CH | 8110130A04 | 205 |
| | | TAP TITE (P) | 3×14 CH | 8110130A44 | 206 |
| | | TAP TITE (P) | 4×40 CH | 8110140D04 | 207 |
| | | TAP TITE (P) PAN GW22 | 5×30 CH | 8141150C04 | 208 |
| | | TAPPING (B0) TRUSS | 4×16 CH | 8117540A64 | 209 |
| | | TAPPING (B0) WH12 | 4×20 CH | 8117F40B04 | 210 |
| | | TAPPING (B1) ROUND | 3.5× 6 CH | 8119135604 | 211 |
| | | TAP TITE (S) | 4× 8 CH | 8107540804 | 212 |
| 3486100-214 | Folienbeutel | POLY, BAG | | 791KHA0050 | – |
| 3486200-213 | Styropor oben | PACKAGE, TOP | | 792KHA0083 | – |
| 3486300-213 | Styropor unten | PACKAGE, BOTTOM | | 792KHA0084 | – |
| 3486400-212 | Faltkarton | GIFT, BOX | | 793KCD0236 | – |



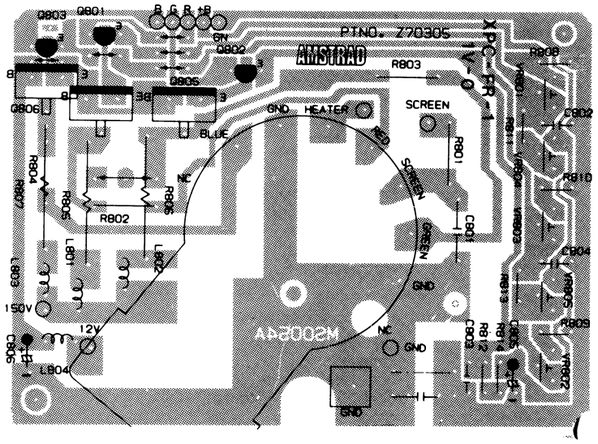
## Mechanical exploded view



## Main/CRT P.C.B.




## CRT P.C.B.




SYMBOL LIST

| | |
|---|---|
| RESISTOR | |
| SEMI-FIXED RESISTOR | |
| CAPACITOR | |
| JUMPER | |

| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| **IC** | | | | | |
| 3498300-302 | IC | OEC9001 | IC | 127D09001A | IC101 |
| 3481700-302 | IC | TC74HC02P | IC | 155D0HC020 | IC102 |
| 2661000-302 | IC | UPC1378H | IC | 102SD13780 | ⚠ IC401 |
| 3498400-302 | IC | LA7820 | IC | 103D078200 | ⚠ IC402 |
| 3498500-302 | IC | STK7356 | IC | 103S073560 | ⚠ IC501 |
| 2164106-302 | IC | L78M12 | IC | 103A98M120 | ⚠ IC502 |
| 3226100-302 | IC | L78M05 | IC | 103A98M050 | ⚠ IC503 |
| 3492500-302 | IC | STK7358 | IC | 103S073580 | ⚠ IC601 |
| 3492600-302 | IC | BA6993 | IC | 107D069930 | IC602 |
| 2438900-302 | IC | LA6324 | IC | 103D063240 | IC603 |
| 3492700-302 | IC | BA707 | IC | 1079907070 | IC604 |
| **Transistoren / Transistors** | | | | | |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q101 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q102 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q103 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q104 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q105 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q106 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q107 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q108 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q109 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q110 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q111 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q112 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q113 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q401 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q402 |
| 3498600-301 | Transistor | 2SD1426 | TRANSISTOR | TD50014260 | ⚠ Q403 |
| 2661400-301 | Transistor | 2SC2271 | TRANSISTOR, SILICON | TC30022710 | Q404 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q601 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q602 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q603 |
| 3492800-3011 | Optokoppler | TLP580 | PHOTO COUPLER | 0002500030 | ⚠ Q604 |
| 3492800-3011 | Optokoppler | TLP580 | PHOTO COUPLER | 0002500030 | ⚠ Q605 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q606 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q607 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q608 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q609 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q610 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q611 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q612 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q613 |
| 3498700-301 | Transistor | 2SB1134R | TRANSISTOR, SILICON | TB3001134R | ⚠ Q614 |
| 2661600-301 | Transistor | 2SD1207-T | TRANSISTOR, SILICON | TD3T012070 | Q615 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q616 |
| 1295900-301 | Transistor | 2SA1015 Y-Type 1 | TRANSISTOR, SILICON | TA5T010154 | Q617 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q618 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q801 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q802 |
| 2613400-301 | Transistor | 2SC1815 Y | TRANSISTOR, SILICON | TC5T018154 | Q803 |
| 3498800-301 | Transistor | 2SC3789 | TRANSISTOR, SILICON | TC3F03789E | Q804 |
| 3498800-301 | Transistor | 2SC3789 | TRANSISTOR, SILICON | TC3F03789E | Q805 |
| 3498800-301 | Transistor | 2SC3789 | TRANSISTOR, SILICON | TC3F03789E | Q806 |
| **Dioden / Diodes** | | | | | |
| 3498900-3044 | Z-Diode | MTZ6.8BT-77 | DIODE, ZENER | D97U06R80B | D101 |
| 3498900-3044 | Z-Diode | MTZ6.8BT-77 | DIODE, ZENER | D97U06R80B | D102 |
| 3498900-3044 | Z-Diode | MTZ6.8BT-77 | DIODE, ZENER | D97U06R80B | D103 |
| 3498900-3044 | Z-Diode | MTZ6.8BT-77 | DIODE, ZENER | D97U06R80B | D104 |
| 3498900-3044 | Z-Diode | MTZ6.8BT-77 | DIODE, ZENER | D97U06R80B | D105 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D106 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D107 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D108 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D109 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D110 |





| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D111 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D112 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D113 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D114 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D115 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D401 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D402 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D403 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D404 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D405 |
| 3499000-304 | Diode | DFD05G | DIODE, RECTIFIER | D23TDFD05G | D406 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D407 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D408 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D409 |
| 3499100-3044 | Z-Diode | MTZ11BT-77 | DIODE, ZENER | D97U01100B | D410 |
| 2656000-3043 | Diode | BB4-FC | DIODE, RECTIFIER | D28F00BB40 | D411 |
| 3499000-304 | Diode | DFD05G | DIODE, RECTIFIER | D23TDFD05G | D412 |
| 3499000-304 | Diode | DFD05G | DIODE, RECTIFIER | D23TDFD05G | D413 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D501 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D502 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D503 |
| 3201900-3041 | Diode | 20E10FA13 | DIODE, SILICON | D28H20E100 | ⚠ D504 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | ⚠ D505 |
| 3499200-304 | Diode | DFC15L-KC5 | DIODE, RECTIFIER | D23IDFC15L | D506 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | D507 |
| 3493600-3044 | Z-Diode | GZB9.1B | DIODE, ZENER | D93019R11B | D508 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | ⚠ D509 |
| 3499300-3041 | Diode | 30DF6 FC | DIODE, RECTIFIER | D28F30DF60 | ⚠ D510 |
| 2662700-3041 | Diode | SR-2M | DIODE, AVARANSHU | D2BF00SR2M | D511 |
| 3493400-3044 | Z-Diode | GZB18B | DIODE, ZENER | D93011801B | D601 |
| 3493600-3044 | Z-Diode | GZB9.1B | DIODE, ZENER | D93019R11B | D602 |
| 3499200-304 | Diode | DFC15L-KC5 | DIODE, RECTIFIER | D23IDFC15L | D603 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | D604 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | D605 |
| 3493700-304 | Diode | DFH10G-KB4 | DIODE, RECTIFIER | D23FDFH10G | ⚠ D606 |
| 3493800-3044 | Z-Diode | GZA18 Y BT | DIODE, ZENER | D93T01800Y | D607 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D608 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D609 |
| 3499000-304 | Diode | DFD05G | DIODE, RECTIFIER | D23TDFD05G | D610 |
| 3494000-304 | Diode | F5KQ60 | DIODE, SCHOTTKY BARRIER | D28A5KQ600 | ⚠ D611 |
| 3494100-304 | Diode | F10P04Q | DIODE, SCHOTTKY BARRIER | D28A0P04Q0 | ⚠ D612 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D613 |
| 0687200-3044 | Z-Diode | MTZ5.1BT-77 | DIODE, ZENER | D97U05R10B | D614 |
| 0687200-3044 | Z-Diode | MTZ5.6BT-77 | DIODE, ZENER | D97U05R60B | D615 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D616 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D618 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | D619 |
| 3493000-3041 | Diode | 1SS132T-77 | DIODE, SILICON | D17T001320 | ⚠ D620 |
| **Widerstände / Resistors** | | | | | |
| 3499400-3217 | Sich.-Widerstand | 100 ½ W | R, FUSE | R61582101J | ⚠ R147 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01202750J | R154 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01202750J | R155 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01202750J | R156 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01202750J | R157 |
| 3494300-3212 | Schiwi | 75 ½ W | RC | R01202750J | R158 |
| 2471400-3217 | Sich.-Widerstand | 100 ¼ W | R, FUSE | R61584101J | ⚠ R412 |
| 3207100-321 | Metallschiwi | 4.7 K 2 W | R, METAL OXIDE | R3118A472J | ⚠ R434 |
| 2659500-3217 | Sich.-Widerstand | 8.2 ¼ W | R, FUSE | R615848R2J | ⚠ R437 |
| 3499500-321 | Metallschiwi | 4.7 3 W | R, METAL OXIDE | R3120B4R7J | ⚠ R438 |
| 3248300-3217 | Sich.-Widerstand | 0.82 1 W | R, FUSE | R61481R82K | ⚠ R442 |
| 3253000-3217 | Sich.-Widerstand | 1 ½ W | R, FUSE | R63582010J | ⚠ R443 |
| 3499400-3217 | Sich.-Widerstand | 100 ½ W | R, FUSE | R61582101J | ⚠ R444 |
| 3494600-3219 | Widerstand | 5.6 5 W | R, CEMENT | R512AD5R6J | ⚠ R501 |
| 3206700-321 | Metallschiwi | 1 3 W | R, METAL OXIDE | R3128B010J | ⚠ R502 |
| 3499600-321 | Metallschiwi | 3.9 K 1 W | R, METAL OXIDE | R31181392J | ⚠ R503 |
| 3499700-321 | Metallschiwi | 3.3 K 1 W | R, METAL OXIDE | R31181332J | ⚠ R504 |
| 3499800-321 | Metallschiwi | 100 2 W | R, METAL OXIDE | R3118A101J | R507 |
| 3499900-321 | Metallschiwi | 33 K 2 W | R, METAL OXIDE | R3118A333J | R508 |
| 3482100-3217 | Sich.-Widerstand | 470 ½ W | R, FUSE | R61582471J | ⚠ R509 |
| 3228600-3217 | Sich.-Widerstand | 10 ¼ W | R, FUSE | R61584100J | ⚠ R510 |

| Best.-Nr. Part-No. | Bezeichnung | | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|---|
| 3207600-321 | Metallschiwi | 15 | 2 W | R, METAL OXIDE | R3E10A150J | R511 |
| 3482000-321 | Metallschiwi | 68 | 2 W | R, METAL OXIDE | R3E10A680J | ⚠ R512 |
| 3494600-3219 | Widerstand | 5.6 | 5 W | R, CEMENT | R512AD5R6J | ⚠ R601 |
| 3206900-321 | Metallschiwi | 0.33 | 2 W | R, METAL OXIDE | R3118AR33J | ⚠ R604 |
| 3494700-321 | Metallschiwi | 82 K | 1 W | R, METAL OXIDE | R3D301823J | R607 |
| 3494900-321 | Metallschiwi | 22 K | 3 W | R, METAL OXIDE | R3128B223J | R609 |
| 2659900-321 | Metallschiwi | 1 K | 1 W | R, METAL OXIDE | R31181102J | ⚠ R610 |
| 3481900-321 | Metallschiwi | 100 | 2 W | R, METAL OXIDE | R3118A101J | R612 |
| 3495000-321 | Metallschiwi | 2.2 K | 1 W | R, METAL OXIDE | R31181222J | ⚠ R613 |
| 1862600-3217 | Sich.-Widerstand | 1 K | ¼ W | R, FUSE | R63584102J | ⚠ R614 |
| 3228600-3212 | Sich.-Widerstand | 10 | ¼ W | R, FUSE | R61584100J | ⚠ R616 |
| 3495100-321 | Metallschiwi | 47 | 1 W | R, METAL OXIDE | R31181470J | R624 |
| 3495200-321 | Metallschiwi | 56 | 1 W | R, METAL OXIDE | R31181560J | ⚠ R637 |
| 3495300-321 | Metallschiwi | 0.22 | ½ W | R, METAL OXIDE | R31202R22J | R641 |
| 3495300-321 | Metallschiwi | 0.22 | ½ W | R, METAL OXIDE | R31202R22J | R642 |
| 3495400-321 | Metallschiwi | 0.22 | 1 W | R, METAL OXIDE | R31181R22J | R643 |
| 3495400-321 | Metallschiwi | 0.22 | 1 W | R, METAL OXIDE | R31181R22J | R644 |
| 3495400-321 | Metallschiwi | 0.22 | 1 W | R, METAL OXIDE | R31181R22J | R645 |
| 3495400-321 | Metallschiwi | 0.22 | 1 W | R, METAL OXIDE | R31181R22J | R646 |
| 3481800-321 | Metallschiwi | 5.6 K | 2 W | R, METAL OXIDE | R3110A562J | ⚠ R805 |
| 3481800-321 | Metallschiwi | 5.6 K | 2 W | R, METAL OXIDE | R3110A562J | ⚠ R806 |
| 3481800-321 | Metallschiwi | 5.6 K | 2 W | R, METAL OXIDE | R3110A562J | ⚠ R807 |

## Kondensatoren / Capacitors

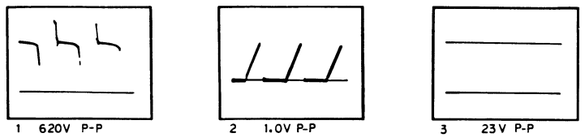
| | | | | | | |
|---|---|---|---|---|---|---|
| 0148000-311 | Foko | 0.1 | µF 100 V | CP | P12201104K | C404 |
| 1194300-307 | Elko | 2200 | µF 35 V | CE | E02104222M | C408 |
| 1194000-311 | Foko | 0.0056 | µF 50 V | CPL | P541F0562J | C424 |
| 3483600-314 | Kerko | 470 | pF 2 KV B | CC | C03FB07Q2K | C429 |
| 3102100-311 | Foko | 0.0082 | µF 1600 V | CMPP | P442F9822J | C430 |
| 3483700-311 | Foko | 0.82 | µF 200 V | CMPP | P441F2824J | C433 |
| 3483200-307 | Elko | 22 | µF 250 V | CE | E0C5FD220T | C436 |
| 1190300-307 | Elko | 1000 | µF 35 V | CE | E027F4102M | C437 |
| 3483500-311 | Foko | 0.1 | µF 200 V | CPP | P341F2104J | C439 |
| 3208500-307 | Elko | 1 | µF 250 V | CE | E0250D010M | C440 |
| 3483400-314 | Kerko | 330 | pF 2 KV | CC | C03BBN7L2K | C444 |
| 3495900-311 | Foko | 0.22 | µF AC 250 V | CMPL | P614FB224M | ⚠ C501 |
| 2664660-314 | Kerko | 0.0022 | µF 2 KV B | CC | C02BB07H3K | C502 |
| 2664600-314 | Kerko | 0.0022 | µF 2 KV B | CC | C02BB07H3K | C503 |
| 2664600-314 | Kerko | 0.0022 | µF 2 KV B | CC | C02BB07H3K | C504 |
| 2664900-314 | Kerko | 2200 | pF 4 KV | CC | C010D09H3M | ⚠ C505 |
| 3496000-307 | Elko | 150 | µF 400 V | CE | E03L0H151M | C506 |
| 0354900-307 | Elko | 10 | µF 100 V | CE | E0B108100M | C509 |
| 2664700-314 | Kerko | 0.0015 | µF 2 KV BN | CC | C03FBN7E3K | C511 |
| 2664700-314 | Kerko | 0.0015 | µF 2 KV BN | CC | C03FBN7E3K | C514 |
| 3248700-307 | Elko | 220 | µF 160 V | CE | E0250B221T | C515 |
| 0588400-307 | Elko | 470 | µF 35 V | CE | E02104471M | C516 |
| 3495900-311 | Foko | 0.22 | µF AC 250 V | CMPL | P614FB224M | ⚠ C520 |
| 2664900-314 | Kerko | 0.0022 | µF 4 KV | CC | CA30E09H3K | ⚠ C521 |
| 2664900-314 | Kerko | 0.0022 | µF 4 KV | CC | CA30E09H3K | ⚠ C522 |
| 3483300-314 | Kerko | 0.0012 | µF 2 KV | CC | C03BBN7B3K | C523 |
| 3496000-307 | Elko | 150 | µF 400 V | CE | E03L0H151M | C601 |
| 2664600-314 | Kerko | 0.0022 | µF 2 KV B | CC | C02BB07H3K | C604 |
| 3496200-314 | Kerko | 0.0056 | µF 500 V B | CC | C020B05S3K | C612 |
| 0590500-307 | Elko | 330 | µF 25 V | CE | E02H03331M | C613 |
| 3496200-314 | Kerko | 0.0056 | µF 500 V B | CC | C020B0553K | C617 |
| 0587600-307 | Elko | 3300 | µF 35 V | CE | E02SG4332M | C618 |
| 3481600-314 | Kerko | 0.0015 | µF 500 V B | CC | C020B05E3K | C620 |
| 3496300-307 | Elko | 3300 | µF 16 V | CE | E02HF2332M | C621 |
| 3496300-307 | Elko | 3300 | µF 16 V | CE | E02HF2332M | C622 |
| 0323500-307 | Elko | 1000 | µF 16 V | CE | E02102102M | C623 |
| 3483300-314 | Kerko | 0.0012 | µF 2 KV BN | CC | C03FBN7B3K | C633 |
| 2665000-314 | Kerko | 0.001 | µF 2 KV BN | CC | C02BB0713K | C801 |

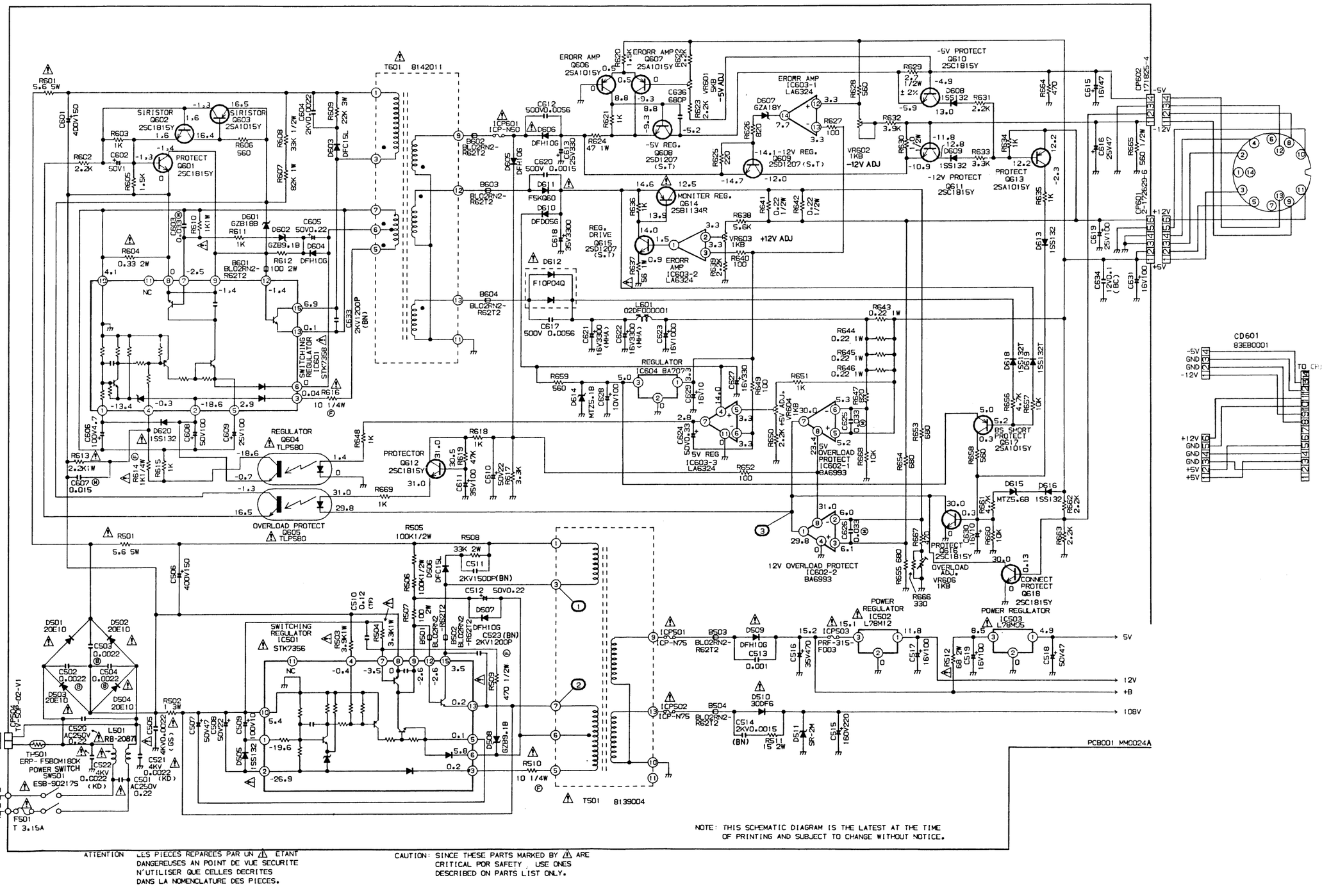




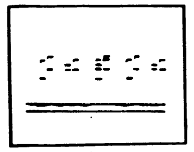
| Best.-Nr. Part-No. | Bezeichnung | | Description | Teile-Nr. Part-No. | Zeich.-Pos. Ref.-No. |
|---|---|---|---|---|---|
| **Spulen und Transformatoren / Coils and Transformers** | | | | | |
| 3482200-3253 | Spule | 1431 MS | COIL, LINEARITY | 0221000002 | L401 |
| 3482300-3253 | Spule | 4.7 mH | COIL, RX-9P-472K | 021804472K | L402 |
| 3482400-3253 | Filter | ESD-R-25D-B1 | FILTER, LINE AC | 02AX2614F2 | L403 |
| 3496600-3252 | Spule | RB-20871 | COIL, LINE FILTER | 0291000001 | ⚠ L501 |
| 3482500-3253 | Spule | 028Y140017 | COIL, DEGAUSS | 028Y140017 | ⚠ L502 |
| 3482600-3253 | Filter | ESD-R-25D-B1 | FILTER, LINE AC | 02AX2614F2 | L503 |
| 3496700-3253 | Spule | SN5-2002 | COIL | 02DF000001 | L601 |
| 3482700-3253 | Spule | 100 µH | COIL, EL0606RA-101K | 021673101K | L801 |
| 3482700-3253 | Spule | 100 µH | COIL, EL0606RA-101K | 021673101K | L802 |
| 3482700-3253 | Spule | 100 µH | COIL, EL0606RA-101K | 021673101K | L803 |
| 2663400-3243 | Trafo Hor. | 305Y001 | TRANS, HORIZONTAL DRIVE | 03305Y001G | T401 |
| 3482800-3244 | Trafo Schaltnetzteil | 8139004 | TRANSFORMER, SWITCHING | 048139004G | ⚠ T501 |
| 3482900-3244 | Trafo Schaltnetzteil | 8142011 | TRANSFORMER, SWITCHING | 048142011G | ⚠ T601 |
| **Verschiedenes / Miscellaneous** | | | | | |
| 3483000-3231 | Poti 500 Ω | | VR, ROTARY | V029200001 | VR102 |
| 3483100-3231 | Poti 100 KΩ | | VR, ROTARY | V028025B04 | VR401 |
| 3483800-502 | Platine-Monitor | | PCB | 13MM0024AB | PCB001 |
| 3483900-502 | Platine-Bildröhre | | PCB | 13MS0054AB | PCB002 |
| 2663800-3274 | Schiebeschalter | | SWITCH, SLIDE SS-009-7H | 0510422001 | SW401 |
| 3497500-3272 | Netzschalter | | SWITCH, PUSH ESB-90217S | 0530105005 | ⚠ SW501 |
| 3484000-3328 | Sockel Bildröhre | | SOCKET, C.R.T. | 0662130002 | ⚠ J801 |
| 3484100-3328 | Sockel | | SOCKET, COVER CRT | 0662320001 | JC801 |
| 3484200-360 | Bildröhre | | TUBE, CATHODE RAY | 093E140401 | ⚠ V801 |
| 0606400-3301 | Sicherung 3.15 AT | | FUSE 3.15 AT | 0809T3R101 | ⚠ F501 |
| 3484300-3244 | Trafo Zeilen | | TRANSFORMER, FLYBACK | 0437140131 | ⚠ FB401 |
| 3203900-302 | ICP-N75 | | IC PROTECTOR | 084702R702 | ⚠ ICP501 |
| 3203900-302 | ICP-N75 | | IC PROTECTOR | 084702R702 | ⚠ ICP502 |
| 3484500-302 | PRF-315-F003 | | IC PROTECTOR | 084E00R301 | ⚠ ICP503 |
| 3497800-302 | ICP-N50 | | IC PROTECTOR | 0847000202 | ⚠ ICP601 |
| 3484400-301 | Thermistor | | DEGAUSS ELEMENT | D810M180K0 | TH501 |
| 3484600-3173 | Kondensator-Netzwerk | | C-NETWORK | 1112510101 | CN101 |
| 3484700-341 | Kabel RGB | | CORD DIN | 0683EB0002 | CD101 |
| 3498000-341 | Netzkabel | | CORD AC | 120L451007 | ⚠ CD501 |
| 3484800-341 | Kabel DC | | CORD DIN | 0683EB0001 | CD601 |
| 3498200-3323 | Buchse | | CONNECTOR PCB SIDE | 0694190019 | CP101 |
| 3484900-3323 | Buchse DC | | CORD UX CONNECTOR | 0694460100 | CP601 |

# Chassis schematic diagram CM

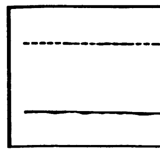




T601 8142011
ERORR AMP Q606 2SA1015Y
ERORR AMP Q607 2SA1015Y
ERORR AMP IC603-1 LA6324
-5V PROTECT Q610 2SC1815Y
SIRISTOR Q602 2SC1815Y
SIRISTOR Q603 2SA1015Y
PROTECT Q601 2SC1815Y
-5V REG. Q608 2SD1207 (S,T)
-14.1~12V REG. Q609 2SD1207(S,T)
-12V PROTECT Q611 2SC1815Y
PROTECT Q613 2SA1015Y
MONITER REG. Q614 2SB1134R
REG. DRIVE Q615 2SD1207 (S,T)
ERORR AMP IC603-2 LA6324
REGULATOR IC604 BA7073
5V REG IC603-3 LA6324
5V OVERLOAD PROTECT IC602-1 BA6993
12V OVERLOAD PROTECT IC602-2 BA6993
OVERLOAD PROTECT Q605 TLP580
REGULATOR Q604 TLP580
PROTECTOR Q612 2SC1815Y
SWITCHING REGULATOR IC501 STK7356
SWITCHING REGULATOR IC601 STK7358
SHORT PROTECT Q617 2SA1015Y
CONNECT PROTECT Q618 2SC1815Y
POWER REGULATOR IC502 L78M12
POWER REGULATOR IC503 L78M05
CD601 83EB0001
TO CP1-B
PCB001 MM0024A
AC IN 220V 50HZ 120L451007
POWER SWITCH SW501 ESB-90217S (KD)
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.
ATTENTION LES PIECES REPEREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL POR SAFETY , USE ONES DESCRIBED ON PARTS LIST ONLY.

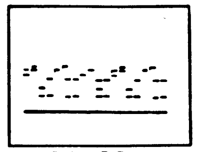
# Chassis schematic diagram CM



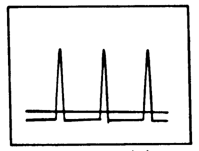
4. 5V P-P



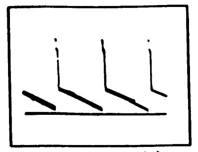
5. 5V P-P



6 3.4V P-P



7 96V P-P (V)

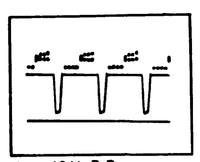


8 54V P-P (H)

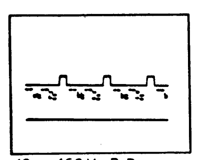
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

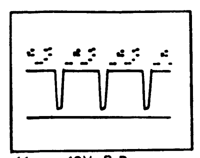
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.



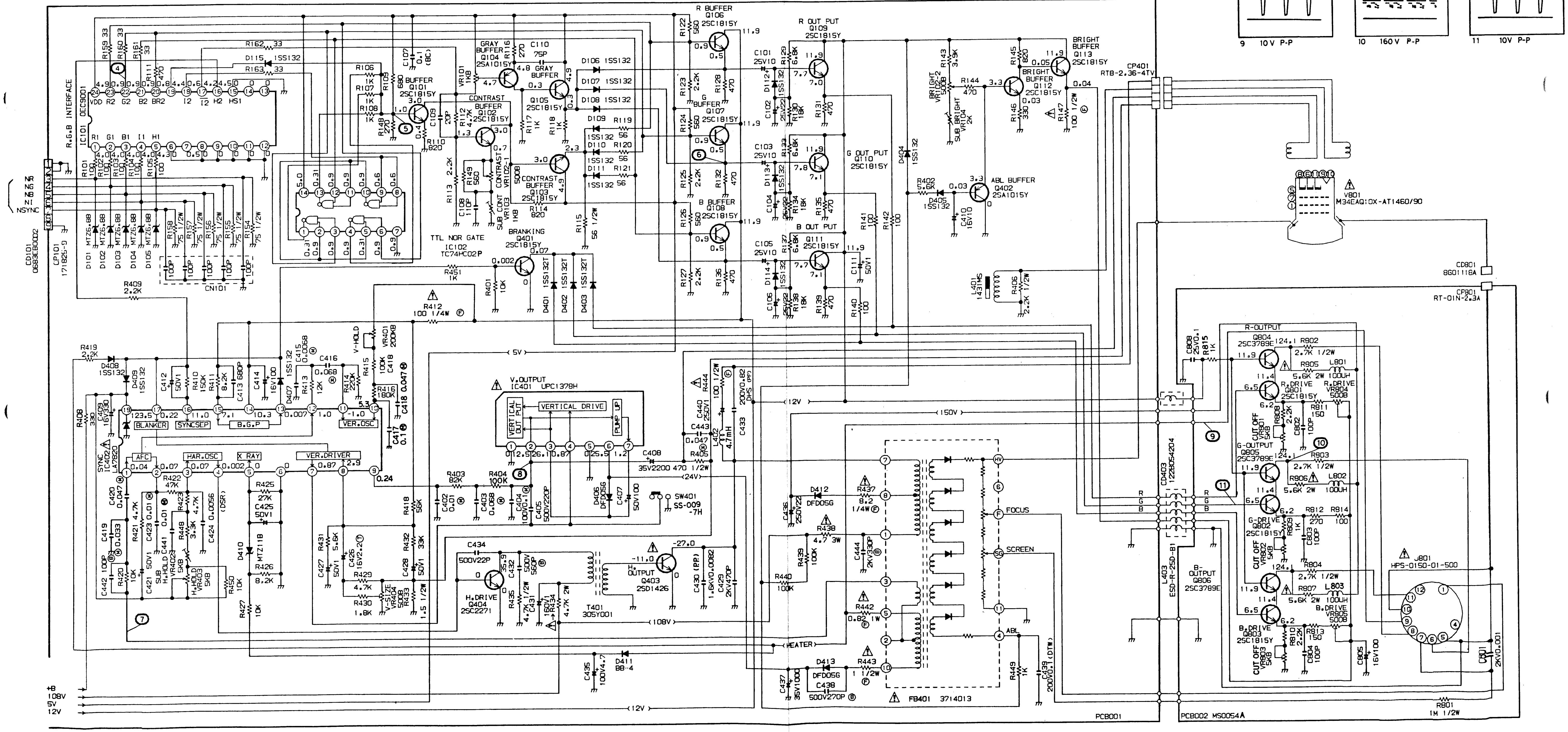
9 10V P-P



10 160V P-P



11 10V P-P



R.G.B INTERFACE
IC101 OEC9001
CD101 0683EB0002
CP101 171825-9
NR
NG
NB
NI
NSYNC
CN101
TTL NOR GATE
IC102 TC74HC02P
BUFFER Q101 2SC1815Y
CONTRAST BUFFER Q102 2SC1815Y
CONTRAST BUFFER Q103 2SC1815Y
GRAY BUFFER Q104 2SA1015Y
GRAY BUFFER Q105 2SC1815Y
R BUFFER Q106 2SC1815Y
G BUFFER Q107 2SC1815Y
B BUFFER Q108 2SC1815Y
R OUT PUT Q109 2SC1815Y
G OUT PUT Q110 2SC1815Y
B OUT PUT Q111 2SC1815Y
BRIGHT BUFFER Q112 2SC1815Y
BRIGHT BUFFER Q113 2SC1815Y
BRANKING Q401 2SC1815Y
ABL BUFFER Q402 2SA1015Y
CP401 RTB-2.36-4TV
V801 M34EAQ10X-AT1460/90
CD801 8G01118A
CP801 RT-01N-2.3A
SYNC IC402 LA7820
BLANKER
SYNCSEP
B.G.P
VER.OSC
AFC
HAR.OSC
X RAY
VER.DRIVER
V.OUTPUT IC401 UPC1378H
VERTICAL OUT PUT
VERTICAL DRIVE
PUMP UP
SW401 SS-009-7H
H.DRIVE Q404 2SC2271
H. OUTPUT Q403 2SD1426
T401 305Y001
FB401 3714013
FOCUS
SCREEN
ABL
HEATER
(5V)
(12V)
(24V)
(108V)
(150V)
CD403 122B054204
L403 ESD-R-25D-B1
R-OUTPUT Q804 2SC3789E
G-OUTPUT Q805 2SC3789E
B-OUTPUT Q806 2SC3789E
R.DRIVE Q801 2SC1815Y
G-DRIVE Q802 2SC1815Y
B.DRIVE Q803 2SC1815Y
J801 HPS-0150-01-500
+B
108V
5V
12V
PCB001
PCB002 MS0054A
R801 1M 1/2W


Technische Änderungen vorbehalten!

HDS 60081/1500/51/86